

# NJIT Research Newsletter

Issue: ORN-2020-42

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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

### **NSF Major Research Instrumentation (MRI) Proposal submission Internal Competition**

Reminder

**Grant Program: NSF Major Research Instrumentation Program: (MRI)**

**Agency: National Science Foundation NSF 18-513**

**RFP Website:** <https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm>

**Brief Description:** The Major Research Instrumentation (MRI) Program serves to increase access to multi-user scientific and engineering instrumentation for research and research training in our Nation's institutions of higher education and not-for-profit scientific/engineering research organizations. An MRI award supports the acquisition or development of a multi-user research instrument that is, in general, too costly and/or not appropriate for support through other NSF programs.

MRI provides support to acquire critical research instrumentation without which advances in fundamental science and engineering research may not otherwise occur. MRI also provides support to develop next-generation research instruments that open new opportunities to advance the frontiers in science and engineering research. Additionally, an MRI award is expected to enhance research training of students who will become the next generation of instrument users, designers and builders.

An MRI proposal may request up to \$4 million for either acquisition or development of a research instrument. Beginning with the FY 2018 competition, each performing organization may submit in *revised* “Tracks” as defined below, *with no more than two submissions in Track 1 and no more than one submission in Track 2*.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to \$100,000<sup>1</sup> and less than \$1,000,000.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to \$1,000,000 up to and including \$4,000,000.

Consistent with the America COMPETES Act of 2007 (Public Law 110-69), cost sharing of precisely 30% of the total project cost is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from the cost-sharing requirement and cannot include it. National Science Board policy prohibits voluntary committed cost sharing.

***Please see the solicitation text for organizational definitions used by the MRI program.***

The MRI Program especially seeks broad representation of PIs in its award portfolio, including women, underrepresented minorities and persons with disabilities. Since demographic diversity may be greater among early-career researchers the MRI program also encourages proposals with early-career PIs and proposals that benefit early-career researchers.

**Awards Range:** \$100,000-\$4 million; **Anticipated Funding Amount:** \$75,000,000

**Letter of Intent:** Not Required

**Submission Deadline:** January 01, 2021 - January 19, 2021

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

Three (3) as described below. Potential PIs are advised to contact their institutional office of research regarding processes used to select proposals for submission.

The MRI program requires that an MRI-eligible organization may, as a performing organization, submit or be included as a significantly funded <sup>[3]</sup> subawardee in no more than three MRI proposals. Beginning with this competition, each performing organization is now limited to a maximum of three proposals in *revised* “Tracks” as defined below, with no more than two submissions in Track 1 and no more than one submission in Track 2. Any MRI proposal may request support for either the acquisition or development of a research instrument. Within their submission limit, NSF strongly encourages organizations to submit proposals for innovative development projects.

**Award Type:** Any MRI proposal may request support for either the acquisition or development of a research instrument.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to \$100,000<sup>1</sup> and less than \$1,000,000.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to \$1,000,000 up to and including \$4,000,000.

Note: The 30% cost-sharing requirement applies to only the portion of the total project cost budgeted to non-exempt organizations, including those participating through subawards. When required, cost-sharing must be precisely 30%. Cost sharing is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from cost-sharing and cannot provide it. National Science Board policy is that voluntary committed cost

sharing is prohibited. See section V.B. for specific information on cost-sharing calculations and the solicitation text for definitions of organizational types used for the MRI program.

[3] An unfunded collaboration does not count against the submission limit. Inclusion as a funded subawardee on a development proposal at a level in excess of 20% of the total budget requested from NSF, or as a funded subawardee, when allowed, on any acquisition proposal, will be counted against an organization's proposal submission limit. Separately submitted linked collaborative proposals count against the submission limit of each of the submitting organizations. However, if a subaward to an organization in a *development proposal* is 20% or less of the proposal's total budget request from NSF, the subawardee's submission limit will not be affected. For subawards within a linked collaborative proposal, the 20% threshold applies to the budget request from NSF in the proposal containing the subaward(s), not to the combined budget request from NSF for the collaborative project.

**Internal Competition Deadline to College Dean's Office: November 1, 2020:** Please submit up to 5 pages pre-proposal white paper to your respective Dean by November 1, 2020 in the following format. College level reviews will be conducted by Deans to forward recommendations for up to 2 proposals to the Office of Research and Development by November 7, 2020. The final selection will be announced by November 15, 2020. The following format for the pre-proposal is suggested which is consistent with actual proposal guidelines and review criterion:

1. Cover Sheet (not counted in the page limit):
  - a. Title of the project proposal
  - b. Track Type: I or II
  - c. PI name and affiliation and contact information
  - d. Co-PIs name and affiliation
  - e. Additional users or any consortium information, if applicable
  - f. Date submitted to College Dean
2. Project Summary

Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.

3. Proposal Description covering the subsections (a)-(e) as posted on the previous RFP on <https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm> with the section:

(a) **a1. Instrument Location and Type**

**a2. ONLY REQUIRED FOR DEVELOPMENT PROPOSALS: Justification for submission as a Development proposal**

- (b) Research Activities to be Enabled
  - (c) Description of the Research Instrumentation and Needs
  - (d) Broader Impacts (Including Impact on Research and Training Infrastructure)
  - (e) Management Plan
4. Preliminary Budget and Budget Justification; and Required Cost-Sharing
  5. Brief biographical sketch of PI with a brief description of current and previous accomplishments.

For pre-proposal review, the NSF MRI proposal review criterion may be used to help faculty receive some feedback on their proposals that may be helpful for their final or future proposal submissions. The merit review criterion as posted on the RFP is:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

### ***Instrument Acquisition Proposals.***

- The extent to which the instrument is used for multi-user, shared-use research and/or research training.
- Whether the management plan demonstrates sufficient commitment and technical expertise for effective scheduling and usage of the instrument.
- The organization's commitment to ensuring successful operations and maintenance over the expected lifetime of the instrument.
- Whether the research to be enabled is compelling and justifies the instrument request.
- Whether the budget request is appropriate and well justified.
- if student involvement is in the form of direct support for operations and maintenance of the instrument, reviewers will be asked to evaluate the involvement in terms of both instrument needs and the training of the next generation of instrumentalists.
- For instrument acquisition proposals of \$1 million or above, the potential impact of the instrument on the research community of interest at the regional or national level, if appropriate.

### ***Instrument Development Proposals:***

- The appropriateness of submission as a development proposal.
- The need for development of a new instrument. Will the proposed instrument enable enhanced performance over existing instruments, or new types of measurement or information gathering? Is there a strong need for the new instrument in the larger user community to advance new frontiers of research?
- The adequacy of the project's management plan. Does the plan have a realistic schedule that is described in sufficient detail to be assessed? Are mechanisms described to mitigate and deal with potential risks?
- The availability of appropriate technical expertise to design and construct the instrument. If direct support for student involvement in development efforts is requested, reviewers will be asked to evaluate the involvement in terms of both project needs and training the next generation of instrumentalists.
- The appropriateness of the cost of the new technology.

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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: Harnessing the Data Revolution (HDR); Institutes for Data-Intensive Research in Science and Engineering; EPSCoR Research Infrastructure Improvement Program: RII Track-2 FEC; Integrative Strategies for Understanding Neural and Cognitive Systems (NCS); Mid-Career Advancement (MCA); EarthCube: Developing a Community-Driven Data and Knowledge Environment for the Geosciences; Human Networks and Data Science (HNDS); Principles and Practice of Scalable Systems (PPoSS); Research on Integrated Photonics Utilizing AIM Photonics Capabilities; Cybersecurity Innovation for Cyberinfrastructure (CICI); Accelerating Research through International Network-to-Network Collaborations (AccelNet); Partnerships for Research and Education in Materials (PREM); Division of Molecular and Cellular Biosciences: Investigator-initiated research projects (MCB); Transitions to Excellence in Molecular and Cellular Biosciences Research (Transitions); Plant Genome Research Program (PGRP); Division of Integrative Organismal Systems Core Programs; Mid-scale Research Infrastructure-1 (Mid-scale RI-1)**

**NIH: BRAIN Initiative Cell Census Network (BICCN) Scalable Technologies and Tools for Brain Cell Census (R01); Discovery of in vivo Chemical Probes for the Nervous System (R01); BRAIN Initiative Fellows (F32); BRAIN Initiative: Pilot resources for brain cell type-specific access and manipulation across vertebrate species (U01)**

**Department of Defense/US Army/DARPA/ONR: Energetics Basic Research Center Fiscal Year 2022; Young Faculty Award (YFA); 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: Community Connect Grant Program; Agriculture and Food Research Initiative - Foundational and Applied Science**

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

**Department of Commerce/EDA: FY2021 to FY2023 NOAA Broad Agency Announcement (BAA); FY2021 Marine Debris Research**

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

**Department of Energy: Atmospheric System Research (ASR); Early Career Research Program; Connected Communities; Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT)**

**NASA: ROSES 2020: Planetary Major Equipment and Facilities; University Student Research Challenge**

**National Endowment of Humanities: Collaborative Research; Digital Humanities Advancement Grants; Scholarly Editions and Scholarly Translations**

**Private Foundations: New Jersey Health Foundation: Innovation Grants Program; Bill and Malina Gates Foundation: Grand Challenge: Balance the Equation - A Grand Challenge for Algebra 1**

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## [Recent Research Grant and Contract Awards](#)

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

**PI:** Vivek Kumar (PI)

**Department:** Biomedical Engineering

**Grant/Contract Project Title:** Powered Toothbrush with Evacuation Technology

**Funding Agency:** NSF

**Duration:** 09/20/20-09/20/21

**PI:** Cody Buntain (PI)

**Department:** informatics

**Grant/Contract Project Title:** Social Media Misinformation: Detection and Impacts

**Funding Agency:** U.S. Department of Energy (Oak Ridge National Lab)

**Duration:** 10/21/20-03/30/21

**PI:** Veronica Guzman (PI)

**Department:** CPCP

**Grant/Contract Project Title:** Upward Bound for English Language Learners (ELLs)

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

**Duration:** 09/01/17-08/31/21

**PI:** Monique Paden-Hutchinson (PI)

**Department:** Center for Community Systems, HCoAD

**Grant/Contract Project Title:** Educational Talent Search Program

**Funding Agency:** CPCP

**Duration:** 09/01/16-08/31/21

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## [In the News...](#)

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

**White House Strategy Names 20 Emerging Technologies Crucial to National Security:** The White House on Thursday rolled out a new strategy to obtain and retain global superiority in world-changing emerging technologies like artificial intelligence, data science and space tech, among others. While the U.S. has been a technology leader for much of the last century, that supremacy is being challenged today. “American leadership in [science and technology] faces growing challenges from strategic competitors, who recognize the benefits of S&T and are organizing massive human and capital resources on a national scale to take the lead in areas with long-term consequences,” according to the newly released [National Strategy for Critical and Emerging Technologies](#). The document promotes a “market-oriented approach” rather than “state-directed models,” which the administration claims “produce waste and disincentivize innovation.” At the same time, the strategy enables the government to “protect ourselves from unfair competition,” citing China and Russia, specifically.

PILLAR I PROMOTE THE NATIONAL SECURITY INNOVATION BASE



- Develop the highest-quality science and technology (S&T) workforce in the world • Attract and retain inventors and innovators
- Leverage private capital and expertise to build and innovate • Rapidly field inventions and innovations
- Reduce burdensome regulations, policies, and bureaucratic processes that inhibit innovation and industry growth
- Lead the development of worldwide technology norms, standards, and governance models that reflect democratic values and interests
- Support the development of a robust National Security Innovation Base (NSIB), to include academic institutions, laboratories, supporting infrastructure, venture funding, supporting businesses, and industry
- Increase priority of research and development (R&D) in developing United States Government budgets
- Develop and adopt advanced technology applications within government and improve the desirability of the government as a customer of the private sector
- Encourage public-private partnerships
- Build strong and lasting technology partnerships with like-minded allies and partners and promote democratic values and principles
- With the private sector, create positive messaging to increase public acceptance of critical and emerging technologies (C&ET)
- Encourage state and local governments to adopt similar actions.

#### PILLAR II PROTECT TECHNOLOGY ADVANTAGE

- Ensure that competitors do not use illicit means to acquire United States intellectual property, research, development, or technologies
- Require security design early in the technology development stages, and work with allies and partners to take similar action
- Protect the integrity of the R&D enterprise by fostering research security in academic institutions, laboratories, and industry, while balancing the valuable contributions of foreign researchers
- Ensure appropriate aspects of C&ET are adequately controlled under export laws and regulations, as well as multilateral export regimes
- Engage allies and partners to develop their own processes similar to those executed by CFIUS
- Engage with the private sector to benefit from its understanding of C&ET as well as future strategic vulnerabilities related to C&ET
- Assess worldwide S&T policies, capabilities, and trends, and how they are likely to influence, or undermine, American strategies and programs
- Ensure secure supply chains, and encourage allies and partners to do the same
- Message to key stakeholders the importance of protecting technology advantage and offer practical assistance whenever possible

The full document, NATIONAL STRATEGY for CRITICAL AND EMERGING TECHNOLOGIES is posted on the [website \(https://www.whitehouse.gov/wp-content/uploads/2020/10/National-Strategy-for-CET.pdf\)](https://www.whitehouse.gov/wp-content/uploads/2020/10/National-Strategy-for-CET.pdf).

**IoT Cybersecurity Improvement Act:** It's no secret that the current state of internet of things, or IoT, security is sub-par. We all see the steady drumbeat of headlines detailing new vulnerabilities in just about every connected device, from [smart vacuums](#) to [digital assistants](#). There is still a lot of work to be done when it comes to making IoT more secure, and the U.S. government is taking notice. The House of Representatives recently passed a bipartisan bill requiring that all IoT devices purchased by the government meet minimum security requirements. Known as the [IoT Cybersecurity Improvement Act](#), the measure directs the National Institute of Standards and Technology to create security standards that government agencies would have to follow when purchasing IoT devices, as well as the management of

their vulnerabilities. IoT transcends far beyond the government—in fact, industry experts forecast there will be as many as [125 billion IoT devices by 2030](#). So, what else can be done to ensure IoT security is at the forefront of everyone’s agenda? More information with the text of the Act is posted on [website](#).

**Microsoft, SpaceX Team Up to Bring Cloud Computing to Space**: Microsoft announced Azure Space, a series of partnerships with space-related companies and satellite providers, most notably an agreement with SpaceX to use the [company’s coming Starlink satellite](#) constellation to bring high-speed, low-latency satellite broadband capabilities to customers in the most remote environments. Starlink satellites will serve as a conduit for data between Microsoft’s traditional data centers and partnered ground stations and the company’s modular data centers, which can securely store, compute and analyze data in areas where traditional high-speed communications are unavailable. Microsoft also announced an expansion of its existing Azure Orbital partnership with satellite telecommunications company SES to further extend connectivity between its cloud data centers and edge devices. More information on the [NextGov website](#).

**NSF Program on Principles and Practice of Scalable Systems (PPoSS)**: A key focus of the design of modern computing systems is performance and scalability, particularly in light of the limits of Moore’s Law and Dennard scaling. To this end, systems are increasingly being implemented by composing heterogeneous computing components and continually changing memory systems as novel, performant hardware surfaces. Applications fueled by rapid strides in machine learning, data analysis, and extreme-scale simulation are becoming more domain-specific and highly distributed. In this scenario, traditional boundaries between hardware-oriented and software-oriented disciplines increasingly are blurred. The aim of the Principles and Practice of Scalable Systems (PPoSS) program is to support a community of researchers who will work symbiotically across the multiple disciplines above to perform basic research on scalability of modern applications, systems, and toolchains. The intent is that these efforts will foster the development of principles that lead to rigorous and reproducible artifacts for the design and implementation of large-scale systems and applications across the full hardware/software stack. These principles and methodologies should simultaneously provide guarantees on correctness and accuracy, robustness, and security and privacy of systems, applications, and toolchains. Importantly, as described below, **PPoSS specifically seeks to fund projects that span the entire hardware/software stack** and will lay the groundwork for sustainable approaches for engineering highly performant, scalable, and robust computing applications. A brief about the NSF RFP [21-513](#) is included in the NSF Funding Opportunities section below.

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## **Webinar and Events**

### **Event: Sustainable Regional Systems Research Networks Webinar**

**Sponsor: NSF**

**When: October 27, 2020 2.30 PM – 3.30 PM**

**Website: [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301383&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301383&org=NSF)**

**Brief Description:** NSF will hold an informational webinar on October 27, 2020, starting at 2:30 PM Eastern to discuss the Sustainable Regional Systems Research Networks (SRS RNs) solicitation and answer questions. The United States is made up of regional systems comprising interdependent urban and rural systems and every community category between urban and rural. Urban systems are dependent on rural systems for the provisioning of food, energy, water, and other materials and natural resources, while rural systems are dependent on urban systems for markets, manufactured goods, and medical resources.



These systems are also connected by ecological processes that both influence and are influenced by human behavior. The vital interconnection of urban-rural systems underscores the critical need for the advancement of sustainable regional systems (SRS). The goal of the NSF SRS RNs solicitation is to fund convergent research and education that will advance sustainable regional systems science, engineering, and education to facilitate the transformation of current regional systems to enhance sustainability.

**To Join the Webinar:** Register in advance at

[https://nsf.zoomgov.com/webinar/register/WN\\_nh16JLVfQ3qzYtRqLlxA7g](https://nsf.zoomgov.com/webinar/register/WN_nh16JLVfQ3qzYtRqLlxA7g)

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

**Event: Taming the Wild West: How an Expanded Regional Wholesale Market Can Make the Western Grid Clean and Resilient**

**Sponsor: Advanced Energy Economy**

**When: October 28, 2020 2.00 PM to 3.30 PM**

**Website: [Registration Website](#)**

**Brief Description:** Western states are charting a course to rapidly transition the region's electricity system and transportation sector to 100% clean energy through a combination of aggressive state energy and transportation policies and voluntary utility and large customer commitments. At the same time, extreme heat and wildfires are threatening the electric grid along with life and property. Can a more integrated regional transmission grid with competitive regional wholesale markets help states meet their clean energy targets and their resilience challenges? What role will states have in guiding an expanded regional grid toward these goals while maintaining a focus on achieving their clean energy targets?

**To Register:** Please register at the above website.

**Event: Webinar: EUHFORIA in PARADISE!**

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

**When: October 29, 2020 1:00 PM to 2:00 PM**

**Website: <https://centers.njit.edu/spaceweather/node/75/>**

**Brief Description:** The EU Horizon2020 project EUHFORIA 2.0 aims at developing an advanced space weather forecasting tool, combining the MHD solar wind and CME evolution model EUHFORIA with the Solar Energetic Particle (SEP) transport and acceleration model PARADISE. We will first introduce EUHFORIA and PARADISE and then elaborate on the plans of the EUHFORIA 2.0 project which will address the geoeffectiveness of impacts and mitigation to avoid (part of the) damage, including that of extreme events, related to solar eruptions, solar wind streams, and SEPs, with particular emphasis on its application to forecast Geomagnetically Induced Currents (GICs) and radiation on geospace. The EUHFORIA 2.0 project started on 1 December 2019, and yielded some first results. These concern alternative coronal models, the application of adaptive mesh refinement techniques in the heliospheric part of EUHFORIA, alternative flux-rope CME models, evaluation of data-assimilation based on Karman filtering for the solar wind modelling, and a feasibility study of the integration of SEP models. The novel tool will be accessible by the whole space weather community via the ESA Space Weather Service Network as it will be integrated in the Virtual Space Weather Modelling Centre (VSWMC), which is part of that network.

**To Register:** Please register at the above website. The Webinar uses the Cisco Webex service available at NJIT (link to

connect: <https://njit.webex.com/njit/j.php?MTID=m5aae3a4893301ecd2d0580c2e4dd27ae;>

meeting ID: 120 263 2079, password: isws).

**Event: NSF Invites Public Participation in Identifying Mid-Scale Infrastructure for STEM Education Research**

**Sponsor: NSF**

**When: October 30, 2020 11.00 AM – 3.00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301450&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301450&org=NSF)

**Brief Description:** The National Science Foundation's Directorate for Education and Human Resources invites your participation in a listening session to stimulate thinking about mid-scale research infrastructure for science, technology, engineering, and mathematics (STEM) education research. It is not intended to make recommendations to NSF. The listening session will be conducted virtually via Zoom. Pre-registration is required for this event.

**To Join the Webinar:** Please pre-register

at: <https://www.zoomgov.com/meeting/register/vJIIsde2urjIsHYW6sfPJfMEdbIUue3USv5M>

A Zoom meeting link and password will be sent to you after your registration is confirmed.

**Event: Postdoctoral Research Fellowships in Biology Virtual Office Hours**

**Sponsor: NSF**

**When: November 2, 2020, 2020 4.00 PM – 5.00 PM**

**November 5, 2020, 2020 4.00 PM – 5.00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301321&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301321&org=NSF)

**Brief Description:** The Postdoctoral Research Fellowships in Biology (PRFB) Program will be holding office hours during the first week of November. These provide an opportunity to learn more about the new solicitation ([NSF 20-602](#)) and the application process.

The office hours will involve a short presentation and time for questions through the Q&A function.

Materials from the office hours will be available on the PRFB Program site for those who are unable to attend and for general reference.

**To Join the Webinar:** Monday, November 2<sup>nd</sup> at 4 PM (EST) and Thursday, November 5<sup>th</sup> at 4 PM (EST): Please click the link below to join the webinar:

<https://nsf.zoomgov.com/j/1602272511?pwd=RVdGUjdmZzBWWkJUblZnQ3YxSGdpZz09>

Passcode: ?^9=Z6

Or iPhone one-tap :

US: +16692545252,,1602272511# or +16468287666,,1602272511#

Or Telephone:

Dial (for higher quality, dial a number based on your current location): US: +1 669 254 5252 or +1 646 828 7666 or 833 568 8864 (Toll Free)

Webinar ID: 160 227 2511

**Event: NSF Electronic Research Administration (ERA) Forum Webinar**

**Sponsor: NSF**

**When: November 5, 2020, 2020 2.30 PM – 4.00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301321&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301321&org=NSF)

**Brief Description:** The purpose of this Forum is to gather individual opinions and perspectives around NSF ERA activities. This open Forum is also used to present proposed solutions, collect feedback, understand how solutions may impact the research community, and solicit volunteers for testing.

The topics for this Forum webinar will tentatively cover the *Research.gov Proposal Preparation and Submission: New Proposal Preparation Demonstration Site and Upcoming Features in Research.gov, Decommissioning Font Size and Font Type Compliance Checks and Warnings, Implementation of Important Notice 147: Migrating Proposal Preparation from FastLane to Research.gov, SciENCv –*

*Overview of Capabilities for Preparing [Biographical Sketch](#) and [Current and Pending Support Documents](#), [PI Transfers](#) and [New Sign-in Options for Research.gov](#).*

**We encourage you to send questions ahead of the November 5, 2020 ERA Forum webinar to [nsferaforum@nsf.gov](mailto:nsferaforum@nsf.gov).**

**To Join the Webinar:** o participate in this Forum webinar, please [Register Now](#).

**Event: Virtual NSF Grants Conference**

**Sponsor:** NSF

**When:** November 16, 2020 1:00 PM to November 20, 2020 4:00 PM

**November 30, 2020 1:00 PM to December 4, 2020 4:00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301319&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301319&org=NSF)

**Brief Description:** Join the National Science Foundation (NSF) for the very first NSF Virtual Grants Conference to be held during the weeks of November 16 and November 30, 2020. Registration will be free of charge and opens on **Thursday, October 29 at 12PM EST**.

This event is designed to give faculty, researchers and administrators key insights into a wide range of current issues at NSF. NSF staff will provide up-to-date information about the proposal and award process, specific funding opportunities and answering attendee questions.

Just like the in-person grants conferences, the NSF Virtual Grants Conference is a must, especially for new faculty, researchers and administrators.

Highlights include:

- New programs and initiatives
- Future directions and strategies for national science policy
- Proposal preparation
- NSF's merit review process
- Conflict of interest policies
- Award Management Topics
- NSF-wide funding opportunities

For those who cannot attend the live conference, all sessions will be recorded and available on-demand shortly after the event.

Please check the [conference website](#) for the most-up-to-date information, and view recordings of sessions from last year's conference.

**To Join the Webinar:** Please check the conference website <https://nsfpolicyoutreach.com/>.

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

**Sponsor:** NSF

**When:** 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 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>

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**[Grant Opportunities](#)**

**[National Science Foundation](#)**

**Grant Program: Harnessing the Data Revolution (HDR): Institutes for Data-Intensive Research in Science and Engineering**

**Agency:** National Science Foundation NSF 21-519

**RFP Website:**

[https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=505828&org=NSF&sel\\_org=NSF&from=fund](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505828&org=NSF&sel_org=NSF&from=fund)

**Brief Description:** NSF's [Harnessing the Data Revolution \(HDR\) Big Idea](#) is a national-scale activity to enable new modes of data-driven discovery that will allow fundamental questions to be asked and answered at the frontiers of science and engineering.

This solicitation will establish a group of HDR Institutes for data-intensive research in science and engineering that can accelerate discovery and innovation in a broad array of research domains. The HDR Institutes will lead innovation by harnessing diverse data sources and developing and applying new methodologies, technologies, and infrastructure for data management and analysis. The HDR Institutes will support convergence between science and engineering research communities as well as expertise in data science foundations, systems, applications, and cyberinfrastructure. In addition, the HDR Institutes will enable breakthroughs in science and engineering through collaborative, co-designed programs to formulate innovative data-intensive approaches to address critical national challenges.

**Awards:** TBA

**Letters of Intent:** Not required

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

**Contacts:** Amy L. Walton CISE/OAC Christopher W. Stark MPS/DMS  
Giovanna Biscontin ENG/CMMI Cheryl L. Eavey SBE/SES  
Daryl W. Hess MPS/DMR Pui S. Ho MPS/CHE

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**Grant Program: EPSCoR Research Infrastructure Improvement Program: Track-2 Focused EPSCoR Collaborations (RII Track-2 FEC)**

**Agency: National Science Foundation NSF 21-518**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21518/nsf21518.htm>

**Brief Description:** The Established Program to Stimulate Competitive Research (EPSCoR) is designed to fulfill the mandate of the National Science Foundation (NSF) to promote scientific progress nationwide. A jurisdiction is eligible to participate in NSF EPSCoR if their most recent 5-year level of total NSF funding is equal to or less than 0.75% of the total NSF budget subject to certain exclusions. Jurisdictions above 0.75% but less than 0.80% are allowed to remain EPSCoR-eligible for up to 5 years. For more details, see: [https://www.nsf.gov/od/oia/programs/epscor/Eligibility\\_Tables/FY2021\\_Eligibility.pdf](https://www.nsf.gov/od/oia/programs/epscor/Eligibility_Tables/FY2021_Eligibility.pdf). Through this program, NSF establishes partnerships with government, higher education, and industry that are designed to effect sustainable improvements in a jurisdiction's research infrastructure, Research and Development (R&D) capacity, and hence, its R&D competitiveness.

RII Track-2 FEC builds interjurisdictional collaborative teams of EPSCoR investigators in scientific focus areas consistent with NSF priorities. Projects are investigator-driven and must include researchers from at least two EPSCoR eligible jurisdictions with complementary expertise and resources necessary to address challenges, which neither party could address as well or rapidly independently. The Science, Technology, Engineering, and Mathematics (STEM) research and education activities should seek to broaden participation through the strategic inclusion and integration of diverse individuals, institutions, and sectors throughout the project. Proposals must describe a comprehensive and integrated vision to drive discovery and build sustainable STEM capacity that exemplifies diversity of all types (individual, institutional, geographic, and disciplinary). The development of diverse early-career faculty is a critical component of this sustainable STEM capacity. For FY 2021, RII Track-2 FEC proposals are invited on a single topic: “**Advancing research towards Industries of the Future to ensure economic growth for EPSCoR jurisdictions.**”

**Awards:** Cooperative Agreement; **Anticipated Funding Amount:** \$7,000,000 to \$10,500,000

Planning Grants: Up to \$250,000 per award with duration up to 1 year.

LARGE Grants: Up to \$1,000,000 per year with duration up to 5 years.

**Letters of Intent:** December 18, 2020

**Proposal Submission Deadline:** January 25, 2021

**Contacts:** John-David Swanson, telephone: (703) 292-2898, email: [jswanson@nsf.gov](mailto:jswanson@nsf.gov)

- Jose Colom-Ustariz, telephone: (703) 292-7088, email: [jcolom@nsf.gov](mailto:jcolom@nsf.gov)
- Eric W. Lindquist, telephone: (703) 292-7838, email: [elindqui@nsf.gov](mailto:elindqui@nsf.gov)

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**Grant Program: Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)**

**Agency: National Science Foundation NSF 21-517**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21517/nsf21517.htm>

**Brief Description:** This program calls for innovative, convergent, boundary-crossing proposals that can best capture those opportunities and map out new research frontiers. NSF seeks proposals that pursue high-value scientific and technical risks by transcending the perspectives and approaches typical of disciplinary research efforts. This cross-directorate program is one element of NSF's participation in the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative (<https://www.nsf.gov/brain/>). NSF envisions a connected portfolio of transformative, integrative projects that create synergistic links across investigators and communities, yielding novel ways of tackling the challenges of understanding the brain in action and in context.

This solicitation extends the NCS program for three years, from FY2021 through FY2023, including biennial competitions for the FRONTIERS proposal class.



The program focuses on four aspects of neural and cognitive systems that are current targets of converging interdisciplinary interests. NCS projects must advance the foundations of one or more of these focus areas, as described further within the solicitation:

1. ***Neuroengineering and Brain-Inspired Concepts and Designs***
2. ***Individuality and Variation***
3. ***Cognitive and Neural Processes in Realistic, Complex Environments***
4. ***Data-Intensive Neuroscience and Cognitive Science***

Proposals must address both risk and reward: **high-risk, high-payoff approaches are expected**. Proposals must also go **beyond the scope of any NSF core program**, or they will not be considered responsive to this solicitation.

**Awards:** NCS will consider two classes of proposals. **FOUNDATIONS** awards will support high-risk, high-payoff projects that advance the foundations of one or more NCS focus areas. **FRONTIERS** awards (FY2021 and FY2023 competitions only) will support ambitious, highly integrative, interdisciplinary projects that advance and connect multiple integrative research threads to tackle challenges that would be intractable without a high level of collaboration and coordination. \$11,000,000 to \$15,000,000

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

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

**Contacts:** Anindya Banerjee, Program Director, CISE/CCF, telephone: (703) 292-7885, email: [abanerje@nsf.gov](mailto:abanerje@nsf.gov)

- Wei Ding, Program Director, CISE/IIS, telephone: (703) 292-8017, email: [weiding@nsf.gov](mailto:weiding@nsf.gov)
- Rudolf Eigenmann, CISE/CCF, telephone: (703) 292-8910, email: [reigenma@nsf.gov](mailto:reigenma@nsf.gov)

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### **Grant Program: Mid-Career Advancement (MCA)**

**Agency: National Science Foundation NSF 21-516**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21516/nsf21516.htm>

**Brief Description:** The MCA offers an opportunity for scientists and engineers at the Associate Professor rank (or equivalent) to substantively enhance and advance their research program through synergistic and mutually beneficial partnerships, typically at an institution other than their home institution. Projects that envision new insights on existing problems or identify new but related problems previously inaccessible without new methodology or expertise from other fields are encouraged.

Partners from outside the PI's own sub-discipline or discipline are encouraged, but not required, to enhance interdisciplinary networking and convergence across science and engineering fields.

By (re)-investing in mid-career investigators, NSF aims to enable and grow a more diverse scientific workforce (more women, persons with disabilities, and underrepresented minorities) at high academic ranks, who remain engaged and active in cutting-edge research.

*The MCA is the only cross-directorate NSF program specifically aimed at providing protected time and resources to established scientists and engineers targeted at the mid-career (Associate Professor rank or equivalent) stage. Participating programs in the Directorates for Biological Sciences (BIO), Geosciences (GEO), Engineering (ENG), Social, Behavioral and Economic Sciences (SBE), and Education and Human Resources (EHR) will accept MCA proposals. PIs are encouraged to discuss the suitability of their MCA proposal with a program officer from the appropriate directorate (see [https://www.nsf.gov/bio/MCA\\_contacts.jsp](https://www.nsf.gov/bio/MCA_contacts.jsp)).*

**Awards:** Standard Grant; **Anticipated Funding Amount:** \$14,000,000 to \$18,000,000

**Letters of Intent:** Not required

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

**Contacts:** MCA Cognizant Program Officers, telephone: (703) 292-4628, email: [MCA.info@nsf.gov](mailto:MCA.info@nsf.gov)

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**Grant Program: EarthCube: Developing a Community-Driven Data and Knowledge Environment for the Geosciences**

**Agency: National Science Foundation NSF 21-515**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21515/nsf21515.htm>

**Brief Description:** EarthCube is a community-driven activity sponsored through a partnership between the NSF Directorate for Geosciences (GEO) and the Office of Advanced Cyberinfrastructure (OAC) within the Directorate for Computer & Information Science & Engineering (CISE) to transform research in the academic geosciences community. EarthCube aims to create a well-connected and facile environment to share data and knowledge in an open, transparent, and inclusive manner, thus accelerating our ability to understand and predict the Earth system.

Achieving EarthCube will require a long-term dialog between NSF and the interested scientific communities to develop cyberinfrastructure that is thoughtfully and systematically built to meet the current and future requirements of geoscientists. New avenues will be supported to gather community requirements and priorities for the elements of EarthCube, and to capture the best technologies to meet these current and future needs. The EarthCube portfolio will consist of interconnected projects and activities that engage the geosciences, cyberinfrastructure, computer science, and associated communities. The portfolio of activities and funding opportunities will evolve over time depending on the status of the EarthCube effort and the scientific and cultural needs of the geosciences community.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$5,000,000 to \$10,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** March 02, 2021

**Contacts:** Eva Zanzerkia, Directorate for Geosciences, Earth Sciences Division, telephone: (703) 292-4734, email: [ezanzerk@nsf.gov](mailto:ezanzerk@nsf.gov)

- Amy Walton, Directorate for Computer and Information Science and Engineering, Division of Advanced Cyberinfrastructure, telephone: (703) 292-4538, email: [awalton@nsf.gov](mailto:awalton@nsf.gov)
- Marc Stieglitz, Directorate for Geosciences, Office of Polar Programs, telephone: (703) 292-4354, email: [mstiegli@nsf.gov](mailto:mstiegli@nsf.gov)

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**Grant Program: Human Networks and Data Science (HNDS)**

**Agency: National Science Foundation NSF 21-514**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21514/nsf21514.htm>

**Brief Description:** The Human Networks and Data Science program (HNDS) supports research that enhances understanding of human behavior and how humans interact with and are influenced by their environments by leveraging data science and network science research across a broad range of topics. HNDS research will identify ways in which dynamic, distributed, and heterogeneous data can provide novel answers to fundamental questions about individual and group behavior. HNDS is especially interested in proposals that provide data-rich insights about human networks to support improved health, prosperity, and security.

HNDS has two tracks:

1. **Human Networks and Data Science – Infrastructure (HNDS-I).** Infrastructure proposals will address the development of data resources and relevant analytic techniques that support fundamental Social, Behavioral and Economic (SBE) research. Successful proposals will, within the financial resources provided by the award, construct user-friendly large-scale next-generation data resources and relevant analytic techniques and produce a finished product that will enable new types of data-intensive research. The databases or techniques should have significant impacts,

either across multiple fields or within broad disciplinary areas, by enabling new types of data-intensive research in the SBE sciences.

2. **Human Networks and Data Science – Core Research (HNDS-R).** Core research proposals will address theoretically motivated questions about the nature, causes, and/or consequences of human behavior (broadly defined) that occurs within contexts defined by the networks that determine the human experience, from the biological networks in the human body to the sociocultural, economic and geospatial networks that comprise human societies. HNDS-R proposals should be submitted through any primary disciplinary program within SBE and not to this solicitation. HNDS-R is interested in leveraging multi-scale, multi-level network data and techniques of network analysis to further theory development across the social sciences. Proposals that address human behavior within complex hierarchical network structures and/or that address problems involving nonlinear dynamics and network heterogeneity are particularly encouraged.

**Awards:** Standard Grant; **Anticipated Funding Amount:** \$8,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** February 04, 2021

**Contacts:** Trisha Van Zandt, telephone: (703) 292-7437, email: [pvanzand@nsf.gov](mailto:pvanzand@nsf.gov)

- Tyler S. Kendall, W13149, telephone: (703) 292-2434, email: [tkendall@nsf.gov](mailto:tkendall@nsf.gov)

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### **Grant Program: Principles and Practice of Scalable Systems (PPoSS)**

**Agency:** National Science Foundation NSF 21-513

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21513/nsf21513.htm>

**Brief Description:** A key focus of the design of modern computing systems is performance and scalability, particularly in light of the limits of Moore’s Law and Dennard scaling. To this end, systems are increasingly being implemented by composing heterogeneous computing components and continually changing memory systems as novel, performant hardware surfaces. Applications fueled by rapid strides in machine learning, data analysis, and extreme-scale simulation are becoming more domain-specific and highly distributed. In this scenario, traditional boundaries between hardware-oriented and software-oriented disciplines increasingly are blurred.

Achieving scalability of systems and applications will therefore require coordinated progress in multiple disciplines such as computer architecture, high-performance computing (HPC), programming languages and compilers, security and privacy, systems, theory, and algorithms. Cross-cutting concerns such as performance (including, but not limited to, time, space, and communication resource usage and energy efficiency), correctness and accuracy (including, but not limited to, emerging techniques for program analysis, testing, debugging, probabilistic reasoning and inference, and verification), security and privacy, robustness and reliability, domain-specific design, and heterogeneity must be taken into account from the outset in all aspects of systems and application design and implementation.

The aim of the Principles and Practice of Scalable Systems (PPoSS) program is to support a community of researchers who will work symbiotically across the multiple disciplines above to perform basic research on scalability of modern applications, systems, and toolchains. The intent is that these efforts will foster the development of principles that lead to rigorous and reproducible artifacts for the design and implementation of large-scale systems and applications across the full hardware/software stack. These principles and methodologies should simultaneously provide guarantees on correctness and accuracy, robustness, and security and privacy of systems, applications, and toolchains. Importantly, as described below, **PPoSS specifically seeks to fund projects that span the entire hardware/software stack** and will lay the groundwork for sustainable approaches for engineering highly performant, scalable, and robust computing applications.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$83,000,000

Planning Grants: Up to \$250,000 per award with duration up to 1 year.

LARGE Grants: Up to \$1,000,000 per year with duration up to 5 years.

**Letters of Intent:** Not required

**Proposal Submission Deadline:** January 25, 2021

**Contacts:** Anindya Banerjee, Program Director, CISE/CCF, telephone: (703) 292-7885, email: [abanerje@nsf.gov](mailto:abanerje@nsf.gov)

- Wei Ding, Program Director, CISE/IIS, telephone: (703) 292-8017, email: [weiding@nsf.gov](mailto:weiding@nsf.gov)
  - Rudolf Eigenmann, CISE/CCF, telephone: (703) 292-8910, email: [reigenma@nsf.gov](mailto:reigenma@nsf.gov)
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## **Grant Program: Dear Colleague Letter: Research on Integrated Photonics Utilizing AIM Photonics Capabilities**

**Agency:** National Science Foundation NSF 21-015

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21015/nsf21015.jsp?org=NSF>

**Brief Description:** AIM PHOTONICS - The American Institute of Manufacturing of Integrated Photonics (AIM) (<http://www.aimphotonics.com>) was established in July 2015 by the U.S. government under Department of Defense (DoD) leadership as a manufacturing innovation institute to advance integrated photonics. AIM Photonics is an industry-led public-private-partnership that focuses the nation's premiere capabilities and expertise to capture and mature critical manufacturing domestic capability for integrated photonics. The Institute's goal is to emulate the dramatic successes experienced by the semiconductor industry over the past 40 years and transition key lessons, processes, and approaches to the photonic integrated circuit (PIC) industry. AIM Photonics supports providing practical access and technology on-ramps for academic communities, as well as for industry and government. AIM Photonics is creating a National PIC manufacturing infrastructure, widely accessible and inherently flexible to meet the challenges of the future marketplace with practical, innovative PIC manufacturing-oriented solutions. Research projects utilizing the AIM Photonics fabrication process technologies via multi-project wafer runs should have an objective to bring a specific innovation to integrated photonics circuits and components or to demonstrate a new approach that uses integrated photonics as its differentiator. Examples of such challenges may include:

- Research into new applications of PICs that have promise of breakthrough performance due to the use of an integrated photonic component;
- New devices that are realizable within AIM Photonics standardized integrated silicon photonics processes;
- PIC implementations that have innovative contributions to advancements of photonics circuits (i.e., low power, greater bandwidths and dynamic ranges, better tolerances, new topologies, etc.);
- Innovative design approaches and new models of integrated photonics devices/circuits; and
- Materials and attachment technologies for incorporating integrated photonics into novel packages.

The NSF ENG Division web sites can be accessed at:

- ECCS: <https://www.nsf.gov/div/index.jsp?org=ECCS>
- IIP: <https://www.nsf.gov/div/index.jsp?org=IIP>

**Awards:** Various

**Letters of Intent:** Not required

**Proposal Submission Deadline:** Please contact the program officer.

**Contacts:** Dominique M. Dagenais ([ddagenai@nsf.gov](mailto:ddagenai@nsf.gov)), Division of Electrical, Communications and Cyber Systems (ECCS)

- Lawrence S. Goldberg ([lgoldber@nsf.gov](mailto:lgoldber@nsf.gov)), Division of Electrical, Communications and Cyber Systems (ECCS)

- Stephen Konek ([skonek@nsf.gov](mailto:skonek@nsf.gov)), SBIR/STTR, Division of Industrial Innovation and Partnerships (IIP)
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**Grant Program: Cybersecurity Innovation for Cyberinfrastructure (CICI)**

**Agency: National Science Foundation NSF 21-512**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21512/nsf21512.htm>

**Brief Description:** The objective of the Cybersecurity Innovation for Cyberinfrastructure (CICI) program is to develop, deploy and integrate solutions that benefit the broader scientific community by securing science data, workflows, and infrastructure. CICI recognizes the unique nature of modern, rapid collaborative science and the breadth of security expertise, infrastructure and requirements among different practitioners, researchers, and scientific projects. CICI seeks projects in three program areas:

1. **Usable and Collaborative Security for Science (UCSS):** Projects in this program area should support novel and applied security and usability research that facilitates scientific collaboration, encourages the adoption of security into the scientific workflow, and helps create a holistic, integrated security environment that spans the entire scientific CI ecosystem.
2. **Reference Scientific Security Datasets (RSSD):** Projects in this program area should capture the unique properties of scientific workflows and workloads as reference data artifacts to support reproducible security research and protect the scientific process.
3. **Scientific Infrastructure Vulnerability Discovery (SIVD):** Projects in this program area should develop and apply techniques to proactively discover vulnerabilities and weaknesses in scientific infrastructure.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$5,000,000 to \$7,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** January 08, 2021

**Contacts:** Robert Beverly, Program Director, CISE/OAC, phone: (703) 292-7068, email: [rbeverly@nsf.gov](mailto:rbeverly@nsf.gov)

- Kevin Thompson, Program Director, CISE/OAC, phone: (703) 292-4220, email: [kthomps@nsf.gov](mailto:kthomps@nsf.gov)
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**Grant Program: Accelerating Research through International Network-to-Network Collaborations (AccelNet)**

**Agency: National Science Foundation NSF 21-511**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21511/nsf21511.htm>

**Brief Description:** The goals of the Accelerating Research through International Network-to-Network Collaborations (AccelNet) program are to accelerate the process of scientific discovery and prepare the next generation of U.S. researchers for multiteam international collaborations. The AccelNet program supports strategic linkages among U.S. research networks and complementary networks abroad that will leverage research and educational resources to tackle grand research challenges that require significant coordinated international efforts. The program seeks to foster high-impact science and engineering by providing opportunities to cooperatively identify and coordinate efforts to address knowledge gaps and research needs. This solicitation invites proposals for the creation of international networks of networks in research areas aligned with a grand challenge identified as a priority by the research community or NSF, such as the NSF Big Ideas or in an active program solicitation. AccelNet awards support the connections among research networks, rather than supporting fundamental research as the primary activity. Each network of networks is expected to engage in innovative collaborative activities that

promote synergy of efforts across networks and provide professional development for U.S. students, postdoctoral scholars, and early-career researchers. Two proposal categories covered by this solicitation include: Design and Implementation.

It is strongly recommended that prospective PIs contact the AccelNet Program Officer(s) to ascertain that the focus and budget of their proposed activities are appropriate for this solicitation.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$10,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** January 04, 2021

**Contacts:** Claire A. Hemingway, OISE, telephone: (703) 292-7135, email: [chemingw@nsf.gov](mailto:chemingw@nsf.gov)

- Chris Schneider, BIO, telephone: (703) 292-7920, email: [cjschnei@nsf.gov](mailto:cjschnei@nsf.gov)
  - Ralph Wachter, CISE, telephone: (703) 292-8950, email: [rwachter@nsf.gov](mailto:rwachter@nsf.gov)
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### **Grant Program: Partnerships for Research and Education in Materials (PREM)**

**Agency:** National Science Foundation NSF 21-510

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21510/nsf21510.htm>

**Brief Description:** The DMR Partnerships for Research and Education in Materials Research (PREM) program aims to enable, build, and grow partnerships between minority-serving institutions and DMR-supported centers and/or facilities to increase recruitment, retention and degree attainment (which defines the PREM pathway) by members of those groups most underrepresented in materials research, and at the same time support excellent research and education endeavors that strengthen such partnerships.

**Awards:** Continuing Grant **Anticipated Funding Amount:** \$3,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** February 05, 2021

**Limit on Number of Proposals per Organization:** 1 per lead institution; Please contact **Atam Dhawan, SVP, Research at [dhawan@njit.edu](mailto:dhawan@njit.edu) if you are interested in submission a proposal.**

**Contacts:** Debasis Majumdar, Program Director, telephone: (703)292-4709, email: [dmajumda@nsf.gov](mailto:dmajumda@nsf.gov)

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### **Grant Program: Division of Molecular and Cellular Biosciences: Investigator-initiated research projects (MCB)**

**Agency:** National Science Foundation NSF 21-509

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21509/nsf21509.htm>

**Brief Description:** The Division of Molecular and Cellular Biosciences (MCB) supports quantitative, mechanistic, predictive, and theory-driven fundamental research designed to promote understanding of complex living systems at the molecular, subcellular, and cellular levels. While recognizing the need for thorough and accurate descriptions of biological complexes and pathways, the priority of the Division is to support work that advances the field by capturing the predictive power of mechanistic, quantitative, and evolutionary approaches.

Proposals are solicited to support research relevant to the four MCB core clusters:

- [Cellular Dynamics and Function](#)
- [Genetic Mechanisms](#)
- [Molecular Biophysics](#)
- [Systems and Synthetic Biology](#)

MCB gives high priority to research projects that use theory, methods, and technologies from life and physical sciences, mathematics, computational sciences, and engineering to address major biological questions that elucidate the rules governing subcellular and cellular processes. Research supported by MCB uses a range of experimental and computational approaches—including *in vivo*, *in vitro* and *in*



*silico* strategies—and a broad spectrum of model and non-model organisms, including microbes and plants.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$100,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** Proposals Accepted Anytime

**Contacts:** Charles Cunningham, telephone: (703) 292-2283, email: [mcb-cdf@nsf.gov](mailto:mcb-cdf@nsf.gov)

- Manju M. Hingorani, telephone: (703) 292-7323, email: [mcb-gm@nsf.gov](mailto:mcb-gm@nsf.gov)
  - Wilson A. Francisco, telephone: (703) 292-7856, email: [mcb-mb@nsf.gov](mailto:mcb-mb@nsf.gov)
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### **Grant Program: Transitions to Excellence in Molecular and Cellular Biosciences Research (Transitions)**

**Agency:** National Science Foundation NSF 21-508

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21508/nsf21508.htm>

**Brief Description:** The Division of Molecular and Cellular Biosciences (MCB) has developed a new opportunity to enable researchers with a strong track record of prior accomplishment to pursue a new avenue of research or inquiry. This funding mechanism is designed to facilitate and promote a PI's ability to effectively adopt empowering technologies that might not be readily accessible in the PI's current research environment or collaboration network. Transformative research likely spans disciplines and minimizing the practical barriers to doing so will strengthen research programs poised to make significant contributions. The award is intended to allow mid-career or later-stage researchers (Associate or Full Professor, or equivalent) to expand or make a transition in their research programs via a sabbatical leave or similar mechanism of professional development and then develop that research program in their own lab. This award will also enable the PI to acquire new scientific or technical expertise, facilitate the investigator's competitiveness, and potentially lead to transformational impacts in molecular and cellular bioscience. The award would fund up to six months of PI salary during the first sabbatical or professional development year, followed by support for continued research for two subsequent years upon the PI's return to normal academic duties. Requests for flexibility in the timing of the sabbatical or professional development year will be considered with appropriate justification. Please contact the cognizant program director for the solicitation. Through this solicitation MCB and NSF hope to develop a novel mechanism that will encourage investigators to expand and/or transition to new research areas aligned with MCB priorities, to increase retention of investigators in science, and to ensure a diverse scientific workforce that remains engaged in active research.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$8,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** Proposals Accepted Anytime

- **Contacts:** Richard J. Cyr, telephone: (703) 292-8440, email: [rcyr@nsf.gov](mailto:rcyr@nsf.gov)
  - Anthony G. Garza, telephone: (703) 292-8440, email: [aggarza@nsf.gov](mailto:aggarza@nsf.gov)
  - Manju M. Hingorani, telephone: 703-292-7323, email: [mhingora@nsf.gov](mailto:mhingora@nsf.gov)
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### **Grant Program: Plant Genome Research Program (PGRP)**

**Agency:** National Science Foundation NSF 21-507

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21507/nsf21507.htm>

**Brief Description:** The Plant Genome Research Program (PGRP) supports genome-scale research that addresses challenging questions of biological, societal and economic importance. PGRP encourages the development of innovative tools, technologies and resources that empower a broad plant research community to answer scientific questions on a genome-wide scale. Emphasis is placed on the scale and



depth of the question being addressed and the creativity of the approach. Data produced by plant genomics should be usable, accessible, integrated across scales and of high impact across biology. Training, broadening participation, and career development are essential to scientific progress and should be integrated in all PGRP-funded projects.

Two funding tracks are currently available:

1. **RESEARCH-PGR TRACK:** Genome-scale plant research to address fundamental questions in biology, including processes of economic and/or societal importance.
2. **TRTech-PGR TRACK:** Tools, resources and technology breakthroughs that further enable functional plant genomics.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$30,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** Proposals Accepted Anytime

**Contacts:** Gerald Schoenknecht, E12337, telephone: (703) 292-5076, email: [gschoenk@nsf.gov](mailto:gschoenk@nsf.gov)

- Diane J. Okamuro, E12344, telephone: (703) 292-4508, email: [dokamuro@nsf.gov](mailto:dokamuro@nsf.gov)
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### **Grant Program: Division of Integrative Organismal Systems Core Programs**

**Agency: National Science Foundation NSF 21-506**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21506/nsf21506.htm>

**Brief Description:** The Division of Integrative Organismal Systems (IOS) Core Programs support research aimed at understanding why organisms are structured the way they are and function as they do. Proposals are welcomed in all of the core scientific program areas supported by the Division of Integrative Organismal Systems (IOS). Areas of inquiry include, but are not limited to, developmental biology and the evolution of developmental processes, nervous system development, structure, modification, function, and evolution; biomechanics and functional morphology, physiological processes, symbioses and microbial interactions, interactions of organisms with biotic and abiotic environments, plant and animal genomics, and animal behavior. Proposals should focus on organisms as a fundamental unit of biological organization. Principal Investigators are encouraged to apply systems approaches that will lead to conceptual and theoretical insights and predictions about emergent organismal properties.

**Awards:** Standard Grant or Continuing Grant; **Anticipated Funding Amount:** \$70,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** Proposals Accepted Anytime

**Contacts:** Developmental Systems Program Directors, telephone: (703) 292-8417,

email: [IOSDSC@nsf.gov](mailto:IOSDSC@nsf.gov)

- Behavioral Systems Program Directors, telephone: (703) 292-8423, email: [IOSBSC@nsf.gov](mailto:IOSBSC@nsf.gov)
  - Physical & Structural Systems Program Directors, telephone: (703) 292-8413, email: [IOSPSS@nsf.gov](mailto:IOSPSS@nsf.gov)
  - Plant Genome Research Program Directors, telephone: (703) 292-8420, email: [dbipgr@nsf.gov](mailto:dbipgr@nsf.gov)
  - Neural Systems Program Directors, telephone: (703) 292-8421, email: [IOSNSC@nsf.gov](mailto:IOSNSC@nsf.gov)
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### **Grant Program: Mid-scale Research Infrastructure-1 (Mid-scale RI-1)**

**Agency: National Science Foundation NSF 21-505**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21505/nsf21505.htm>

**Brief Description:** NSF defines Research Infrastructure (RI) as any combination of facilities, equipment, instrumentation, or computational hardware or software, and the necessary human capital in support of the same. Major facilities and mid-scale projects are subsets of research infrastructure. The NSF Mid-scale Research Infrastructure-1 Program (Mid-scale RI-1) supports the design or implementation of

unique and compelling RI projects. Mid-scale RI-1 implementation projects may include any combination of equipment, instrumentation, cyberinfrastructure, broadly used large-scale datasets, and the commissioning and/or personnel needed to successfully complete the project, or the design efforts intended to lead to eventual implementation of a mid-scale class project. Mid-scale RI-1 design projects will include the design efforts intended to lead to eventual implementation of a mid-scale class RI project. Mid-scale RI-1 projects should fill a research community-defined scientific need or enable a national research priority to be met. Mid-scale RI-projects should also enable US researchers to remain competitive in a global research environment and involve the training of a diverse workforce engaged in the design and implementation of STEM infrastructure.

Mid-scale RI-1 emphasizes strong scientific merit, a response to an identified need of the research community or fulfillment of a national need to enable U.S. researchers to be competitive in a global research environment. Well-conceived technical and management plans are required for both design and implementation projects, as are well-developed plans for student training and the involvement of a diverse workforce in all aspects of mid-scale activities.

Within Mid-scale RI-1, proposers may submit two types of projects, "Implementation" (e.g., acquisition/construction) and "Design". The "Design" track is intended to facilitate progress toward readiness for a mid-scale range implementation project. Both Implementation and Design projects may involve new or upgraded research infrastructure. Mid-scale RI-1 "Implementation" projects may have a total project cost ranging from \$6 million up to but not including \$20 million. Only Mid-scale RI-1 "Design" projects may request less than \$6 million, with a minimum request of \$600,000 and a maximum request up to but not including \$20 million, as appropriate, to prepare for a future mid-scale range implementation project. (Note: Successful award of a Mid-scale RI-1 design project does not imply NSF commitment to the future implementation of the project being designed, nor is a Mid-scale RI-1 design award required for the submission of an implementation project.)

Mid-scale research infrastructure projects beyond the Mid-scale RI-1 program limit are separately solicited through the Mid-scale RI-2 program.

**Awards:** Standard Grant or Continuing Grant or Cooperative Agreement; **Anticipated Funding Amount:** \$70,000,000 to \$80,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:**

- **Preliminary Proposal Due Date(s) (required)** (due by 5 p.m. submitter's local time):  
January 07, 2021
- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):  
April 23, 2021

By Invitation Only

**Contacts:** Randy L. Phelps, OIA, telephone: (703) 292-8040, email: [rphelps@nsf.gov](mailto:rphelps@nsf.gov)

- Robert D. Fleischmann, BIO, telephone: (703) 292-7191, email: [rfleisch@nsf.gov](mailto:rfleisch@nsf.gov)
- Deepankar (Deep) Medhi, CISE, telephone: (703) 292-8950, email: [dmedhi@nsf.gov](mailto:dmedhi@nsf.gov)

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## [National Institutes of Health](#)

**Grant Program: BRAIN Initiative Cell Census Network (BICCN) Scalable Technologies and Tools for Brain Cell Census (R01 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-MH-21-140**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-21-140.html>

**Brief Description:** The BRAIN Initiative Cell Census Program awarded 9 projects in 2017, 5 in 2018, and 8 in 2019 under a group of FOAs ([RFA-MH-17-210,-215,-225](#), and [-230](#), [RFA-MH-19-148](#), and [-149](#)), which collectively constitute the [BICCN](#)). The overarching goal of the BICCN is to generate comprehensive 3D common reference brain cell atlases that will integrate molecular, anatomical, functional, and cell lineage data for describing cell types in mouse, human, and non-human primate brains. The expected outcomes of the BICCN include:

- fundamental knowledge on diverse cell types and their three dimensional organizational logic in the brain;
- an open-access 3D digital brain cell reference atlas with molecular, anatomical, and physiological annotations of brain cell types in mouse;
- a comprehensive neural circuit diagram in mouse brain;
- reagents for cell-specific targeting;
- validated high throughput and low-cost approaches to characterizing cell diversity in human and/or non-human primate brain samples.

The BICCN operates as a cooperative network to promote collaboration and coordination among the projects within the Network and the BRAIN Initiative, as well as with any external research entities that have similar goals. Currently, the BICCN has established close collaboration and coordination relationship with BRAIN Initiative Informatics Infrastructure projects funded under [RFA-MH-17-255](#), [RFA-MH-17-256](#), [RFA-MH-257](#) and reissues of those FOAs. It is expected that the BICCN awardees and their collaborators will work together to achieve the common goals. This will involve regular meetings and other coordinated activities within the BICCN as well as the BRAIN Initiative and more broadly with the research and education communities. Thus, the BICCN will leverage existing atlases and common coordinate systems to facilitate collaborative efforts for the data annotation and 3D spatial mapping.

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

**Letter of Intent:** February 10, 2021

**Proposal Submission Deadline:** March 10, 2021

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:** Yong Yao, Ph.D., National Institute of Mental Health (NIMH); Telephone: 301-443-6102

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

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**Grant Program: Discovery of in vivo Chemical Probes for the Nervous System (R01 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health PAR-21-029**

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-21-029.html>

**Brief Description:** Technological innovations in chemical synthesis, cheminformatics, structural biology, and high throughput bioactivity and drug property assays have allowed rapid discovery of novel, small-molecule probes for the study of disease-related biological processes and mechanisms in academic environments.

Through this Funding Opportunity Announcement (FOA), NIMH, NIDA, NEI and/or NIA encourage applications to advance the discovery of small molecule chemical probes that would enable, by modulating the function of a novel biological target, mechanistic questions to be addressed in animal studies. The NIH aims to stimulate research in 1) discovery and development of a novel *in vivo* chemical probes for their potential use in understanding biological processes relevant to the missions of the

participating NIH Institutes, and 2) use of chemical probes to discover and/or validate novel biological targets that will inform studies of brain disease mechanisms. Emphasis will be placed on research that provides new insight into important disease-related biological targets and biological processes. For example, applications may involve emerging therapeutic targets and mechanisms for the discovery of chemical probes that may lead to further development of therapeutics or provide insight into the biology of relevant diseases.

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

**Letter of Intent:** Not Required.

**Proposal Submission Deadline:** [Standard dates](#) apply.

The first standard due date for this FOA is February 5, 2021.

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:** Enrique L. Michelotti, Ph.D., National Institute of Mental Health (NIMH), Telephone: 301-443-5415 Email: [michelottiel@mail.nih.gov](mailto:michelottiel@mail.nih.gov)

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**Grant Program: BRAIN Initiative Fellows: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (F32)**

**Agency: National Institutes of Health RFA-MH-20-620**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-20-620.html>

**Brief Description:** The integrated program of research and training supported by this FOA is intended for postdoctorates who are early in their postdoctoral training period in a given laboratory or research environment, rather than for advanced postdoctorates. Support for early postdoctoral training will maximize the training potential of this fellowship award. Given the interval when applications will be accepted (from 12 months prior to completing terminal degree requirements to 12 months after starting postdoctoral training), it is recognized that some applicants are unlikely to have had the opportunity to generate preliminary data for the proposed project. Accordingly, it is expected that there will be no preliminary data in the application, although inclusion of preliminary data is permissible. The proposed research and training plan should focus on a research area and/or skill set that clearly and strongly complements the applicant's existing research expertise and skills and that will markedly broaden the applicant's knowledge and skills. For example, an applicant with existing skills in molecular neuroscience might propose a research training plan that emphasizes circuit-level neuroscience approaches to brain function. An applicant with existing neuroscience training might propose a research training plan that emphasizes neuroethics. An applicant trained in physics or statistics might propose a research training plan that emphasizes data-intensive/computational approaches to neuroscience.

**Awards:** Individuals may receive up to 5 years of aggregate Kirschstein-NRSA support at the Award budgets are composed of stipends, tuition and fees, and institutional allowance.

**Letter of Intent:** November 9, 2020; July 10, 2021, March 11, 2022, November 9, 2022

**Proposal Submission Deadline:** December 9, 2020; August 10, 2021, April 11, 2022, December 9, 2022 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. 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:** Ashlee Van't Veer, PhD; National Institute of Mental Health (NIMH); Telephone: 301-443-3107; Email: [Brain.Initiative.Training@nih.gov](mailto:Brain.Initiative.Training@nih.gov)

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**Grant Program: BRAIN Initiative: Pilot resources for brain cell type-specific access and manipulation across vertebrate species (U01 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-MH-20-556**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-20-556.html>

**Brief Description:** The purpose of this FOA is to evaluate molecular or genetic technologies and create pilot production and distribution resources for cell type-specific access and manipulation reagents for several vertebrate species. Applicants to this FOA should propose demonstration projects for reagent resource production, validation, and dissemination. The proposed projects should be scalable. The proposed projects should demonstrate the potential to achieve as many of the following goals as possible. Applicants are required to address goals 1, 2, and 3:

1. Reagents enable unique access to many molecularly defined neural cell types that are found in a complex brain region or significant brain network of a vertebrate and that could exhibit distinct cellular, circuit, or behavioral functions.
2. Reagents are easily produced, disseminated, utilized, and stored.
3. Collection of reagents are catalogued for users in a brain atlas and registered to cell types based on molecular, anatomical, or other properties that can be referenced.
4. Reagents are applicable to both genetically tractable and less tractable organisms in common use by neuroscientists.
5. Specificity and efficiency of targeting brain cell types are validated to be quantitatively high and reproducible.
6. Toxic or perturbative effects to cells, tissues, and organisms are quantitatively low.
7. Access technologies provide flexibility to deliver various reporter, sensor, and effector payloads and are compatible with other methods of access.
8. Technologies to access cell types are potentially usable in human *ex vivo* brain tissue or cells to target gene editors or other effectors to disease-relevant circuits for future therapies.

**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 date

**Proposal Submission Deadline:** February 11, 2021; October 19, 2021, by 5:00 PM local time of applicant organization.

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:** Douglas S. Kim, Ph.D., National Institute of Mental Health (NIMH), Telephone: 301-827-6463, Email: [douglas.kim@nih.gov](mailto:douglas.kim@nih.gov)

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**[Department of Defense/US Army/DARPA/ONR/AFOSR](#)**

**Grant Program: Department of Army Energetics Basic Research Center Fiscal Year 2022**

**Agency: Department of Defense Dept of the Army -- Materiel Command W911NF-21-S-0001**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329459>

**Brief Description:** The future Army is projected to be unable to achieve dominance in range and lethality due to inadequate energetic formulations and form factor limitations associated with current weapon systems. Basic research generates new knowledge that may be exploited to develop and deliver new



materials and technologies that contribute to enhanced lethal effects at the system level as well as increased range and a smaller payload. These, in turn, enable space for larger, missioncritical systems, and shorter time-to-target ensuring Army battlefield dominance in MultiDomain Operations. Army research must encompass new ways to expedite the discovery, design, and scale-up of new materials and concepts which when integrated into newly designed weapons components (e.g. additively manufactured high strength steels with pre-formed fragmentation patterns, and structural reactive materials) developed at ARL and across the Army and DoD communities, will deliver decisive weapons overmatch.

To achieve the desired future technological overmatch, advances must be made in new synthetic methodologies targeting novel energetic materials to increase performance for both explosive and propulsion applications. Physics-based synthesis (e.g., processes that use pressure, mechanical action, electromagnetic fields and/or high-energy plasmas) can potentially access materials outside those available via classical chemical synthesis, allowing exploitation of novel, nontraditional materials capable of explosive energy release (e.g., dense metastable extended solids such as doped poly-nitrogen, structural-bond-energy release materials, composite reactive materials).

**Awards:** It is anticipated that \$3M in annual funding will be available for award to a single proposal under Funding Area One (Center). It is also anticipated that up to \$1M in annual aggregate funding will be available for all awards under Funding Area Two (Seedling). It is anticipated that the Seedling awards will range from \$60k-\$250k per year, with typical awards in the range of \$120k-\$180k per year. Awards in the upper end of the range will be made only for extremely meritorious proposals. Seedling Proposals submitted under Funding Area Two in excess of \$250k per year will not be considered. It is anticipated that \$4M per year is the aggregate funding available for all full proposal awards under the EBRC BAA (to include Center and Seedling awards).

**Letter of Intent:** White papers are required.

**Proposal Deadline:** White Papers Due: 3 January 2021; Final Proposals by Invite Only Due: 2 May 2021

**Contact Information:** Program Manager: Ralph A. Anthenien Jr., [ralph.a.anthenien2.civ@mail.mil](mailto:ralph.a.anthenien2.civ@mail.mil), 919-549-4317 b. Technical Points of Contact (TPOCs) i. Robert Mantz [robert.a.mantz.civ@mail.mil](mailto:robert.a.mantz.civ@mail.mil) 919-549-4309 ii. Stephen Lee [stephen.j.lee28.civ@mail.mil](mailto:stephen.j.lee28.civ@mail.mil) 919-549-4365 iii. Edward Byrd [edward.f.byrd2.civ@mail.mil](mailto:edward.f.byrd2.civ@mail.mil) 410-306-0729

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### **Grant Program: Young Faculty Award (YFA)**

**Agency: Department of Defense DARPA DARPA-RA-21-01**

**Website:** <https://beta.sam.gov/opp/aabf37db17b949b88494684292eb854e/view>

**Brief Description:** The Defense Advanced Research Projects Agency (DARPA) Young Faculty Award (YFA) program aims to identify and engage rising stars in junior faculty positions in academia and equivalent positions at non-profit research institutions and expose them to Department of Defense (DoD) and National Security challenges and needs. In particular, YFA will provide high-impact funding to elite researchers early in their careers to develop innovative new research directions in the context of enabling transformative DoD capabilities. The long-term goal of the program is to develop the next generation of scientists and engineers in the research community who will focus a significant portion of their future careers on DoD and National Security issues. DARPA is particularly interested in identifying outstanding researchers who have previously not been performers on DARPA programs, but the program is open to all qualified applicants with innovative research ideas.

**Awards:** Multiple awards are anticipated. Anticipated Funding Available for Award: Each award will include a 24-month base period (a maximum of \$500,000) and a 12-month option period (a maximum of \$500,000).

**Letter of Intent:** Executive Summary Due Date: October 26, 2020, 4:00 p.m. o FAQ Submission Deadline: December 21, 2020, 4:00 p.m. See Section VIII.A.



**Proposal Deadline:** Full Proposal Due Date: January 8, 2021, 4:00 p.m.

**Contact Information:** BAA Coordinator [DARPA-RA-21-01@darpa.mil](mailto:DARPA-RA-21-01@darpa.mil)

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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: Pilot Program for Transit-Oriented Development (TOD) Planning 2020 Notice of Funding**

**Agency:** Department of Transportation FTA-2020-014-TPE

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

**Brief Description:** The Pilot Program for TOD Planning is intended to fund comprehensive planning that supports economic development, ridership, multimodal connectivity and accessibility, increased transit access for pedestrian and bicycle traffic, and mixed-use development near transit stations. The program also encourages identification of infrastructure needs and engagement with the private sector. Consistent with statutory direction, FTA is seeking comprehensive planning projects covering an entire transit capital project corridor, rather than proposals that involve planning for individual station areas or only a small section of the corridor. To ensure any proposed planning work reflects the needs and aspirations of the local community and results in concrete, specific deliverables and outcomes, transit project sponsors must partner with entities with land use planning authority in the transit project corridor to conduct the planning work.

The Pilot Program for TOD Planning helps support FTA's mission of improving public transportation for America's communities by providing funding to local communities to integrate land use and transportation planning around a new fixed guideway or core capacity improvement project. Per statute, any comprehensive planning funded through the program must examine ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near transit stations.

FTA will hold a webinar on this funding opportunity at a date and time to be announced. The webinar will provide an overview of the program, describe eligible applicants and projects, and offer an opportunity for attendees to obtain answers to other questions.

**Award:** The Federal Transit Administration (FTA) announces the availability of approximately \$6.2 million in Pilot Program. FTA may award amounts ranging from \$250,000 to \$2,000,000.

**Letter of Intent:** Not Required

**Proposal Deadline:** An applicant must submit a proposal electronically by **11:59 p.m. Eastern Daylight Time on October 26, 2020.**

**Contact Information:** Dwayne Weeks, Office of Planning and Environment, (202) 493-0316, email: [Dwayne.Weeks@dot.gov](mailto:Dwayne.Weeks@dot.gov)

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## [Department of Agriculture:](#)

### **Grant Program: Community Connect Grant Program**

**Agency: Department of Agriculture RDRUS-CC-2021**

**Website:** <https://www.rd.usda.gov/sites/default/files/CCFOAFY21.pdf>

**Brief Description:** The Agency encourages applications that will help improve life in Rural America. See information on the Interagency Task Force on Agriculture and Rural Prosperity found at [www.usda.gov/ruralprosperity](http://www.usda.gov/ruralprosperity). Applicants are encouraged to consider projects that provide measurable results in helping rural communities build robust and sustainable economies through strategic investments in infrastructure, partnerships and innovation. Key strategies include: • Achieving e-Connectivity for Rural America • Developing the Rural Economy • Harnessing Technological Innovation • Supporting a Rural Workforce • Improving Quality of Life

**Awards:** Grant from \$100,000 to \$3,000,000 will be applied to this grant opportunity

**Proposal Deadline:** December 23, 2020

**Contact Information:** Contact Us at: [https://www.rd.usda.gov/programs-services/communityconnect-grants#blocktabs-program\\_page--45](https://www.rd.usda.gov/programs-services/communityconnect-grants#blocktabs-program_page--45).

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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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## [Department of Labor](#)

### **Grant Program: H-1B One Workforce Grant Program**

**Agency: Department of Labor FOA-ETA-20-13**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329075>

**Brief Description:** The Employment and Training Administration (ETA), U.S. Department of Labor (DOL, or the Department, or we), announces the availability of up to \$150 million in grant funds authorized under section 414(c) of the American Competitiveness and Workforce Improvement Act of 1998 (ACWIA), as amended (codified at 29 USC 3224a) for the H-1B One Workforce grant program. We expect to fund approximately 15–30 grants, with individual grant amounts ranging from \$500,000 to \$10 million. The purpose of this grant program is to fill critical shortages in economic regions by encouraging

states and economic regions to work with industry stakeholders to develop dynamic workforce strategies that train workers and jobseekers for middle- to high-skilled H-1B occupations in key industry sectors, such as Information Technology (IT), advanced manufacturing, and transportation that are being transformed by technological advancements and automation, as well as other industries of the future that include artificial intelligence (AI), quantum information sciences (QIS), 5G/advanced communications, and biotechnology.

These grants will build proof of concepts of innovative training models that can be replicated by the broader workforce system. Applicants must build support for a common vision for responding to the workforce challenges within their state and economic regions, ensuring that their projects complement and leverage, but do not duplicate existing programs. By forging public-private partnerships—H-1B One Workforce Partnerships—applicants will bring together industry and employers, education and training providers, the workforce system, state and local government, and other entities that will work collaboratively to align resources in response to employer demand and to offer novel education and job training solutions that generate positive outcomes and results.

**Awards:** Awards up to \$10,000,000; Anticipated available funding: \$150,000,000.

**Proposal Deadline:** Nov 12, 2020 The closing date for receipt of applications under this announcement is November 12, 2020. Applications must be received no later than 4:00:00 p.m. Eastern Time.

**Contact Information:** Andrea Chism Grants Management Specialist [Chism.Andrea.N@dol.gov](mailto:Chism.Andrea.N@dol.gov)

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## **Department of Commerce/EDA**

**Grant Program: FY2021 to FY2023 NOAA Broad Agency Announcement (BAA)**

**Agency: U.S. Department of Commerce NOAA-NFA-NFAPO-2021-2006626**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329261>

**Brief Description:** This Broad Agency Announcement is a mechanism to encourage research, education and outreach, innovative projects, or sponsorships that are not addressed through NOAA's competitive discretionary programs. This announcement is not soliciting goods or services for the direct benefit of NOAA. Funding for activities described in this notice is contingent upon the availability of Fiscal Year 2021, Fiscal Year 2022, and Fiscal Year 2023 appropriations. Applicants are hereby given notice that funds have not yet been appropriated for any activities described in this notice. Publication of this announcement does not oblige NOAA to review an application beyond an initial administrative review, or to award any specific project, or to obligate any available funds. As an agency with responsibilities for maintaining and improving the viability of marine and coastal ecosystems, for delivering valuable weather, climate, and water information and services, for understanding the science and consequences of climate change, and for supporting the global commerce and transportation upon which we all depend, NOAA must remain current and responsive in an ever-changing world.

**Awards:** Contingent to the availability of funds.

**Letter of Intent:** Contact the program director.

**Proposal Deadline:** Applications can be submitted on a rolling basis starting from the publication date of this Broad Agency Announcement up to 11:59:59 p.m., Eastern Daylight Time on September 30, 2023.

**Contact Information:** Mr. Lamar Dwayne Revis, 301-628-1308, [lamar.revis@noaa.gov](mailto:lamar.revis@noaa.gov)

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**Grant Program: FY2021 Marine Debris Research**

**Agency: U.S. Department of Commerce NOAA-NOS-ORR-2021-2006620**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329047>

**Brief Description:** The NOAA Marine Debris Program (MDP), authorized in the Marine Debris Act (33 U.S.C. 1951-1958), provides funding to support eligible organizations to conduct research directly related to marine debris through field, laboratory, and modeling experiments. NOAA MDP invites applications for research that investigates and identifies the critical input pathways for marine debris introduction into the coastal zone (shoreline or nearshore), including evaluation of appropriate simultaneous pathways of riverine transport downstream, surface runoff, stormwater discharge, and wind-driven transport, and degradation and fragmentation of debris during transport. Projects should be original, hypothesis-driven projects that have not previously been addressed to scientific standards. Successful proposals through this solicitation will be funded through cooperative agreements. Funding of up to \$2,000,000 is expected to be available for Marine Debris Research grants in Fiscal Year 2021 (FY21). Funding for this grant competition comes through the NOAA Marine Debris Program as annual or supplemental appropriations to the Office of Response and Restoration, National Ocean Service.

**Awards:** Typical awards will range from \$150,000 - \$300,000.

**Letter of Intent:** Applicants must submit a Letter of Intent (LOI) and receive an invitation from the NOAA MDP before submitting a full proposal. LOIs must be submitted as an email attachment to [grants.marinedebris@noaa.gov](mailto:grants.marinedebris@noaa.gov) by 11:59 pm Eastern Time on November 5, 2020.

**Proposal Deadline:** Full applications must be received by 11:59 p.m. Eastern Time, February 8, 2021.

**Contact Information:** Tom Barry [tom.barry@noaa.gov](mailto:tom.barry@noaa.gov), 202-870-2863

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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](#); [DebraM Jones](#)

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## [Department of Energy](#)

### **Grant Program: Atmospheric System Research (ASR)**

**Agency: Department of Energy Office of Science DE-FOA-0002391**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329520>

**Brief Description:** The DOE SC program in Biological and Environmental Research (BER) hereby announces its interest in receiving applications for Atmospheric System Research (ASR) within BER's Earth and Environmental Systems Sciences Division (EESDD). ASR supports research on key cloud, aerosol, precipitation, and radiative transfer processes that affect the Earth's radiative balance and hydrological cycle, especially processes that limit the predictive ability of regional and global models. This FOA solicits research grant applications for observational, data analysis, and/or modeling studies that use observations[1] supported by BER, including the Atmospheric Radiation Measurement (ARM) user facility, to improve understanding and model representation of: 1) aerosol-cloud interactions, 2) aerosol processes, 3) warm boundary layer processes, 4) Arctic atmospheric processes from ARM's Cold-Air Outbreaks in the Marine Boundary Layer Experiment (COMBLE) and Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC) campaigns, and/or 5) convective cloud processes from ARM's Cloud, Aerosol, and Complex Terrain Interactions (CACTI) field campaign. All research supported from awards under this FOA is intended to benefit the public through increasing our understanding of the Earth system.

**Awards:** Anticipated available funding: \$14,600,000

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

**Submission Deadline:** Submission Deadline for Pre-Applications: December 2, 2020, 5:00 pm Eastern Time A Pre-Application is required Pre-Application Response Date: December 16, 2020, 5:00 Eastern Time Submission Deadline for Applications: January 27, 2021, 11:59 pm Eastern Time

**Contact:** Dr. Shaima L. Nasiri [Shaima.Nasiri@science.doe.gov](mailto:Shaima.Nasiri@science.doe.gov)

Dr. Jeff Stehr [Jeff.Stehr@science.doe.gov](mailto:Jeff.Stehr@science.doe.gov)

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### **Grant Program: Early Career Research Program**

**Agency: Department of Energy DE-FOA-0002421**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=329485>

**Brief Description:** DOE SC hereby invites applications for support under the Early Career Research Program in the following program areas: Advanced Scientific Computing Research (ASCR); Basic Energy Sciences (BES); Biological and Environmental Research (BER); Fusion Energy Sciences (FES); High Energy Physics (HEP); Nuclear Physics (NP); Isotope R&D and Production (DOE IP); or Accelerator R&D and Production (ARDAP). The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by SC.

SC's mission is to deliver the scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States. SC 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.

Early Career Research Program opportunities exist in the following SC research programs. Additional details about each program, websites, and technical points of contacts are provided in the FOA. A. Advanced Scientific Computing Research (ASCR); B. Basic Energy Sciences (BES); C. Biological and Environmental Research (BER); D. Fusion Energy Sciences (FES); E. High Energy Physics (HEP); F.



Nuclear Physics (NP); G. Isotope R&D and Production (DOE IP); and H. Accelerator R&D and Production (ARDAP)

**Awards:** Anticipated available funding: \$100,000,000

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

**Submission Deadline:** Submission Deadline for Pre-Applications: November 20, 2020 at 5:00 PM Eastern Time A Pre-Application is required Pre-Application Response Date: December 17, 2020  
Submission Deadline for Applications: February 16, 2021 at 5:00 PM Eastern Time

**Contact:** Area contacts are listed in the FOA. Additional contact: [SC.Early@science.doe.gov](mailto:SC.Early@science.doe.gov)

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### **Grant Program: Connected Communities**

**Agency:** Department of Energy DE-FOA-0002206

**Website:** <https://eere-exchange.energy.gov/#FoaId9d24afcd-e292-4ea2-a4d3-d36e2b9dd9c7>

**Brief Description:** A Connected Community (CC) is a group of grid-interactive efficient buildings GEB with diverse, flexible end use equipment and other distributed energy resources (DERs) that collectively work to maximize building, community, and grid efficiency. Under this FOA, DOE will select a portfolio of “Connected Community” projects totaling up to \$65 million in varying climates, geographies, building types, building vintages, DERs utility/grid/regulatory structures and resource bases. Through funding these projects, DOE hopes to find and share technical and market solutions that will increase demand flexibility and energy efficiency.

**Modification 0001: The purpose of this modification was to add Section I.C.: Teaming List, to page 18 of the FOA.**

There will be a FOA informational webinar held on Tuesday, November 10, 2020, at 2:00pm Eastern Standard Time (EST). The Link to this webinar

is: <https://doe.webex.com/doe/onstage/g.php?MTID=e79d137a47d21fdde524f723b98c55b77>

Questions regarding the FOA must be submitted to [CCPilotsFOA@ee.doe.gov](mailto:CCPilotsFOA@ee.doe.gov)

Answers to the questions will be posted to an excel spreadsheet found in the announcement Documents section of the FOA posting.

**Awards:** Anticipated available funding: \$65,000,000

**Letter of Intent:** Concept Paper Submission Deadline: 2/17/2021 5:00 PM ET

**Submission Deadline:** Full Application Submission Deadline: 3/3/2021 5:00 PM ET

**Contact:** [EERE-ExchangeSupport@hq.doe.gov](mailto:EERE-ExchangeSupport@hq.doe.gov)

For questions about the Exchange System or submitting an application through Exchange. Include FOA name and number in subject line

- [CCPilotsFOA@ee.doe.gov](mailto:CCPilotsFOA@ee.doe.gov)

For questions regarding the Connected Communities FOA

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### **Grant Program: Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) – 2020**

**Agency:** Department of Energy DE-FOA-0002196

**Website:** <https://eere-exchange.energy.gov/#FoaIdaff0bc6d-95b0-4aa6-901b-2ef0a53e8f7e>

**Brief Description:** This FOA is being issued by the U.S. Department of Energy’s (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Building Technologies Office (BTO). This section describes the overall goals of BTO and the type of projects that are being solicited for funding support through this FOA. BTO’s overall goal is to improve the energy productivity of buildings without sacrificing occupant comfort or product performance. Progress towards achieving this goal will make building energy costs more affordable to the benefit of American families and businesses. The objective of this Funding

Opportunity Announcement (FOA) is to research and develop next-generation building technologies that have the potential for significant energy savings and improved demand flexibility, affordability, and occupant comfort. An additional goal is to advance building construction, remodeling, and retrofit practices, and associated workforces.

**Awards:** EERE expects to make a total of approximately \$80 million of federal funding available for new awards under this FOA, subject to the availability of appropriated funds.

**Letter of Intent:** Concept Paper Submission Deadline: 11/5/2020 5:00 PM ET

**Submission Deadline:** Full Application Submission Deadline: 1/20/2021 5:00 PM ET

**Contact:** [EERE-ExchangeSupport@hq.doe.gov](mailto:EERE-ExchangeSupport@hq.doe.gov) EERE eXCHANGE

- [DE-FOA-0002196@netl.doe.gov](mailto:DE-FOA-0002196@netl.doe.gov) FOA Questions

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## [NASA](#)

### **Grant Program: ROSES 2020: Planetary Major Equipment and Facilities**

**Agency:** NASA NNH20ZDA001N-PMEF

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B6484508D-46C2-D599-347D-D610E1F847CD%7D&path=&method=init>

**Brief Description:** The Planetary Major Equipment and Facilities (PMEF) program element allows proposals for the purchase or development of new or upgraded non-flight analytical, computational, telescopic, and other instrumentation to be used in investigations in Planetary Science Division (PSD) research programs.

There are two types of PMEF instruments that may be proposed: Investigator Instruments and Facility Instruments. • An "Investigator Instrument" is acquired or developed by the proposer to support the PI's research, where the PI has full authority for its exclusive use, and where there are no commitments to make the instrument available to other investigators. • A "Facility Instrument" is acquired or developed to support a wide range of planetary science research. Facility Instrument proposals may identify a portion of the instrument time to be reserved for use by the PI, or by an identified group of PSD-supported investigators, but a significant fraction of instrument time must be made available to other knowledgeable researchers conducting investigations in planetary science. All details of access, announcement of availability, assistance to be provided on its use, and methods of use (whether hands on or by a facility-based operator), charges, and data rights must be documented and agreed to by NASA and the sponsoring institution before NASA support is provided.

**Awards:** \$1.5M but may be supplemented by Target programs

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

**Proposal Deadline: PMEF20 Step-1 Proposals Due:** December 4, 2020

**Contact:** Jeffrey N. Grossman, Planetary Science Division, Science Mission Directorate, NASA Headquarters, Telephone: (202) 358-1218, Email: [HQ-PME@mail.nasa.gov](mailto:HQ-PME@mail.nasa.gov)

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### **Grant Program: University Student Research Challenge**

**Agency:** NASA NNH20ZEA001N-USRC

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BC9CC1B80-9F50-7B37-2A9B-33CC623FA556%7D&path=&method=init>

**Brief Description:** USRC seeks to challenge students to propose new aeronautics ideas/concepts that are relevant to ARMD. Apart from this, the students also have the challenge of raising cost share funds

through crowdfunding1 platform. The process of creating and preparing a crowdfunding campaign acts as a teaching accelerator - requiring students to act like entrepreneurs and taking action. Understanding the market, fundraising and execution are major skills for a future entrepreneur. Crowdfunding also raises awareness in the general public about students' research. Finally, crowdfunding is being used to excite and bring in non-traditional communities in relationship with ARMD. USRC's strategic goals are: • Provide broad opportunities for students at different levels, including undergraduate and graduate, to participate in aeronautics research; • Assist in achieving aviation outcomes defined in the ARMD Strategic Implementation Plan ("Strategic Plan") [1] through NASA-complementary research.

**Awards:** About 5 awards; Available Funding: \$80,000

**Notice of Intent:** Not required.

**Proposal Deadline:** Three-page proposals for the next USRC cycle are due November 12, 2020. Proposals can also be submitted later and will be evaluated in two additional cycles with due dates: February 25, 2021 and June 24, 2021.

**Contact:** Quickest way to resolve questions about this NRA is to email questions to: [HQ-USRC@mail.nasa.gov](mailto:HQ-USRC@mail.nasa.gov)

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## **National Endowment of Humanities**

### **Grant Program: Collaborative Research**

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

**Website:** <https://www.neh.gov/grants/research/collaborative-research-grants>

**Brief Description:** Debate, exchange of ideas, and working together—all are basic activities that advance humanities knowledge and foster rich scholarship that would not be possible by researchers working on their own. The Collaborative Research program aims to advance humanistic knowledge through sustained collaboration between two or more scholars. Collaborators may be drawn from a single institution or several institutions across the United States; up to half of the collaborators may be based outside of the U.S. The program encourages projects that propose diverse approaches to topics, incorporate multiple points of view, and explore new avenues of inquiry in the humanities.

The program allows projects that propose research in a single field of study, as well as interdisciplinary work. Projects that include partnerships with researchers from the natural and social sciences are encouraged but must employ a humanistic research agenda. Partnerships among different types of institutions are welcome as well as new collaborations with international partners.

Proposed projects must aim to result in tangible and sustainable outcomes, for example, co-authored or multi-authored books; born-digital publications; themed issues of peer-reviewed journals; a series of peer-reviewed articles; and open-access scholarly digital resources. All project outcomes must incorporate interpretive work and collaboration to address significant humanities research questions.

**Award:** Maximum award amount: Up to \$250,000 (depending on funding category).

**Proposal Deadline:** Optional Draft due October 15, 2020; Application due December 2, 2020

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

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### **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.

**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.

**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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### **Private Foundations**

#### **New Jersey Health Foundation**

**Grant Program:** Innovation Grants Program

**Agency:** New Jersey Health Foundation

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

**Brief Description:** The Innovation Grants Program helps researchers and students at our affiliated organizations -- Kessler Foundation, New Jersey Institute of Technology, Princeton University, Rowan University, Rutgers University and Stevens Institute of Technology -- continue to advance their research by providing grants of up to \$50,000 to support further development of their work. Grants must be used to fund only direct program costs. Grants cannot be used to fund overhead, tuition or any other indirect costs. We created the Innovation Grants Program to help address an important need of researchers in the middle stage of our funding continuum – in between very early research ideas and those ready to form companies.

Many of the researchers who receive Innovation Grants have great ideas but lack access to funding and other resources to further their research. Most do not have an understanding of the business processes required to achieve their goal – proof of concept and commercialization of their work to make their device or treatment available to those who need it. Our team provides mentoring and direction to researchers. Recently supported projects hold the promise of creating tremendous benefits for society. Researchers are investigating ways to detect the early onset of dementia, investigating novel treatments for alcohol use disorder, combating diabetes, treating intraocular diseases, developing insect repellents to improve global health, and researching approaches to combat cancers and allergic inflammation. To obtain more information, please click [here](#).

**Awards:** Full-time faculty members, staff and other personnel at these organizations are eligible to apply for grants of up to \$35,000 each under the Research Grant Program and grants up to \$25,000 each under the Community Health and Social Service Grant Program

**Proposal Deadline:** Applications will be accepted from September 21, 2020 through November 13, 2020.

**Contact:** If you have any questions, please don't hesitate to send an e-mail to [researchgrant@njhf.org](mailto:researchgrant@njhf.org).

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## **Bill and Malina Gates Foundation**

**Grant Program: Grand Challenge: Balance the Equation - A Grand Challenge for Algebra 1**

**Agency: Bill and Malina Gates Foundation**

**Website:** <https://gcgh.grandchallenges.org/challenge/balance-equation-grand-challenge-algebra-1>

**Brief Description:** Grand Challenges is a family of initiatives fostering innovation that historically solve key problems in global health and development for those most in need. These initiatives use challenges to focus attention and effort on specific problems. They can be traced back to over a century ago when a mathematician named David Hilbert defined a set of unsolved problems to spark progress in the field of mathematics. Each initiative is an experiment in the use of challenges to focus innovation on having an effect. Balance the Equation is the first-ever Grand Challenge focused on U.S. education.

The Bill & Melinda Gates Foundation is seeking to disrupt the deeply imbalanced system against this generation – and previous generations – of Black, Latino, English Learners (ELs), and students experiencing poverty in the United States, who we will refer to as priority students, as it relates to their Algebra 1 experience in 7th, 8th, or 9th grade, in-class or online.

**Awards: Phase 1: Planning and Prototyping** grant for US\$100,000 to develop a pilot study plan alongside our external learning partner, American Institute for Research ([AIR](#)).

**Proposal Deadline:** Nov 06, 2020, 12:00 pm PST

**Contact:** [For questions, please contact the Balance the Equation Grand Challenge Team at: \[balancetheequation@gatesfoundation.org\]\(mailto:balancetheequation@gatesfoundation.org\)](#)

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## [Streamlyne Question of the Week](#)

Question: Can I generate budgets for multiple years from the Year-1 budget in Streamlyne?

Answer: Yes! You only need to input the Year-1 budget and then click on the “generate all periods” button. Streamlyne will create budget sheets for the remaining periods. You can then go to “summary” under the budget tab to review budget sheets for all periods. You can also change specific budget items that you allocated in Year-1 but you do not want to continue them in the following periods.

More FAQs on Streamlyne: Please visit <http://www.njit.edu/research/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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