

NJIT Research Newsletter

Issue: ORN-2021-16

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> .

[Contents](#)

[Special Announcements](#): Page 1

[Grant Opportunity Alerts: Keyword Index](#): Page 2

[Recent Awards](#): Page 3

[In the News \(Related to research funding\)](#): Page 3

[Webinars and Events](#): Page 6

[Grant Opportunities](#): Page 9

[National Science Foundation](#)

[National Institutes of Health](#)

[Department of Defense](#)

[Department of Transportation](#)

[Department of Agriculture](#)

[Department of Labor](#)

[Department of Commerce/EDA](#)

[Environmental Protection Agency](#)

[Department of Energy](#)

[NASA](#)

[National Endowment of Humanities](#)

[Private Foundations](#)

[Streamlyne Question of the Week](#): Page 36

[Proposal Submission and Streamlyne Information](#): Page 36

[Special Announcements](#)

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 current institutional, state and federal guidelines. Details on NJIT Research Continuity and Recovery Plan and associated protocols are posted on the website <https://research.njit.edu/njit-pandemic-recovery-plan>

[Back to Contents](#)

[Grant Opportunity Alerts](#)

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Undergraduate STEM Education: Education and Human Resources (IUSE: EHR); Racial Equity in STEM Education (EHR Racial Equity)Trans-Atlantic Platform Recovery, Renewal, and Resilience in a Post-Pandemic World (T-AP RRR); Alliances for Graduate Education and the Professoriate (AGEP); Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowships; NSF Convergence Accelerator Program

NIH: NIH Blueprint and BRAIN Initiative Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award (F99/K00); NIH Director's Pioneer Award Program (DP1); Clinical Trial Optional)Bridges to the Doctorate Research Training Program (T32); BRAIN Initiative: Targeted BRAIN Circuits Projects- TargetedBCP (R01); NINDS Faculty Development Award to Promote Diversity in Neuroscience Research (K01)

Department of Defense/US Army/DARPA/ONR: Air Force Fiscal Year 2022 Young Investigator Research Program (YIP); Biological Technologies; CENTER OF EXCELLENCE (COE): Brain-Derived Neuromorphic Computing with Intelligent Materials Defense Manufacturing Communities Support Program; ERDC Broad Agency Announcement; Quantum Benchmarking; Peer Reviewed Orthopaedic Research Program: Clinical Translational Research Award; DoD Spinal Cord Injury, Investigator- Initiated Research Award; Multidisciplinary Research Program of the University Research Initiative (MURI)

Department of Transportation: DDETFP Transportation Fellowship Program; High Priority Program – Innovative Technology Deployment (HP-ITD)

Department of Agriculture: Soil Science Collaborative Research Proposals; Agriculture and Food Research Initiative - Foundational and Applied Science

Department of Labor: State Apprenticeship Expansion, Equity and Innovation (SAEEI) Grant Program

Department of Commerce/EDA: EDA University Center Competition – CRO; NOAA Science Collaboration Program; FY2021 to FY2023 NOAA Broad Agency Announcement (BAA)

EPA: Early Career: Measurement and Monitoring Methods for Air Toxics and Contaminants of Emerging Concern in the Atmosphere

Department of Energy: SOLAR ENERGY TECHNOLOGIES: Photovoltaics and Concentrating Solar Power; Data Reduction for Science; University-Based Energy Industry Research and Development of Scalable Cyber-Physical Solutions

NASA: ROSES 2021: Instrument Incubator Program; ROSES 2021: Heliophysics Mission Concept Studies; ROSES 2021: Living With a Star Science; New (Early Career) Investigator Program in Earth Science; Earth Science Applications: Health and Air Quality; Advanced Information Systems Technology

National Endowment of Humanities: American Rescue Plan: Humanities Grantmaking; Digital Projects for the Public; Humanities Initiatives; Research and Development

Private Foundations: New Jersey Commission on Spinal Cord Research: Exploratory Research Grants and Postdoctoral and Graduate Student Fellowship Research Grants

American Diabetes Association (ADA): The American Diabetes Association Health Disparities and Diabetes Research Award

[Back to Contents](#)

[Recent Research Grant and Contract Awards](#)

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

PI: Matthew Adam (PI) and Matthew Bandelt (Co-PI)

Department: Civil and Environmental Engineering

Grant/Contract Project Title: UTC - (Comparative Analysis of Rapid Chloride Penetration Testing for Novel Reinforced Concrete Systems)

Funding Agency: U.S. Department of Transportation

Duration: 05/01/21-06/30/22

PI: Vincent Ora (PI)

Department: Computer Science

Grant/Contract Project Title: Fusion Recruiting Labs Training Course

Funding Agency: Fusion Recruiting Labs, Inc.

Duration: 04/01/21-03/31/22

PI: Esra Buyuktahtakin-Toy (PI) and Wenbo Cai (Co-PI)

Department: Mechanical and Industrial Engineering

Grant/Contract Project Title: Risk-Averse Surveillance and Intervention Planning for Emerald Ash Borer in Community Forests

Funding Agency: USDA - US Forest Service

Duration: 07/01/18-05/29/23

PI: Brittany Froese Hamfeldt (PI)

Department: Mathematical Sciences

Grant/Contract Project Title: CAREER: Generated Jacobian Equations in Geometric Optics and Optimal Transport

Funding Agency: NSF

Duration: 07/01/18-06/30/23

[Back to Contents](#)

[In the News...](#)

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

Rmy Explores Biohybrid Robots: Looking to pave the way for the production of nimble robots that can move more like living creatures than bulky androids, Army Research Laboratory scientists are embarking on fresh, [high-risk studies in biohybrid robotics](#) that could eventually fuse organic tissue with machines.

“This is wholly new to the lab, and the field itself is still relatively young. The publications associated with the first idea of successfully integrating muscle tissue or cells into some larger architecture to control motion with that same biological device didn't really start until after 2000—and really spooled up in the early 2010s. So it's very young, even as a discipline,” explained Dr. Dean Culver, a research scientist at the laboratory. “And that kind of gave us an opportunity to see how we could help move it forward and what expertise that we had that we could levy in that direction to really make an impact.” More information is posted on the [NextGov website](#).

Technology and Innovation Directorate within the National Science Foundation: More than 20 lawmakers from both parties and chambers collectively called for the creation of a Technology and Innovation Directorate within the National Science Foundation—and proposed authorizing \$100 billion over five years there to drive research into emerging technologies that could help ensure the U.S. keeps a competitive edge. Mandates that would impact multiple other federal agencies were also included in the [Endless Frontier Act](#), which Senate Majority Leader Chuck Schumer, D-N.Y., Sen. Todd Young, R-Ind., and Reps. Ro Khanna, D-Calif., and Mike Gallagher, R-Wis., led a broader group of lawmakers in reintroducing this week. It follows a similar but not identical version of [legislation under the same name](#) put forward in the previous Congressional session.

“We spent the last year seeking and listening to feedback from the science community, researchers, constituents, labor groups, industry leaders, national security stakeholders, and key members and committees in Congress,” Khanna told *Nextgov* in an email statement Thursday. “We took into account various suggested changes they raised as we updated the bill.” One of the core, top-line elements again included is that novel NSF directorate. It would be explicitly intended to implement strategies and enable basic and translational research opportunities, according to the bill, to advance key modern technological areas such as quantum computing and information systems, artificial intelligence, biotechnology, semiconductors, robotics and more. Among other duties, that directorate would work to help diversify the STEM workforce, steer massive research investments at universities to push forward those technology realms, and institute programs to accelerate the transfer of tools between labs and the marketplace. That directorate could also partner with the rest of the agency, as well as others including the Energy Department and National Institute of Standards and Technology to achieve its aims.

This legislation would also allocate \$10 billion over five years for the Commerce Department to put toward boosting technology and innovation in regional hubs across the nation, and another \$2.4 billion for work with other agencies to expand U.S. manufacturing-centered initiatives. More information is posted on the [NextGov website](#).

Predictive Modeling in Law Enforcement: Eight Democratic lawmakers raised concerns about the deployment of algorithms that automate policing decisions, via a [letter](#) penned to the Justice Department Thursday, “We ask DOJ to help ensure that any predictive policing algorithms in use are fully documented, subjected to ongoing, independent audits by experts, and made to provide a system of due process for those impacted,” the lawmakers wrote to Attorney General Merrick Garland. “If DOJ cannot ensure this, DOJ should halt any funding it is providing to develop and deploy these unproven tools.” Reps. Yvette D. Clarke, D-N.Y., and Sheila Jackson Lee, D-Texas, and Sens. Ron Wyden, D-Ore., Elizabeth Warren, D-Mass., Edward Markey, D-Mass., Jeff Merkley, D-Ore., Alex Padilla, D-Calif., and Raphael Warnock, D-Ga., [signed](#) the note.

Predictive policing [involves](#) law enforcement officials implementing mathematical and predictive analytics, and other technology-based techniques, to pinpoint potential crimes. In their letter, the lawmakers said two primary ways such methods are used are to predict locations where crimes could occur in a particular window, or predict which individuals might be involved in future illegal acts. Algorithms draw from historical crime data, and at times other data elements like weather patterns or gunfire detection, to produce the forecasts. More information is posted on the [NextGov website](#).

Office of Management and Budget Releases the President’s Fiscal Year 2022 Discretionary Funding Request: The Office of Management and Budget (OMB) today submitted to Congress President Biden’s discretionary funding request for Fiscal Year 2022. As Congress prepares to begin the annual appropriations process, the request lays out the President’s discretionary funding recommendations across a wide range of policy areas and outlines a strategy for reinvesting in the foundations of our country’s resilience and strength. The request — which represents only one element of the Administration’s broader

agenda — includes key investments in K-12 education, medical research, housing, civil rights, and other priorities that are vital to our future. Later this spring, the Administration will release the President’s Budget, which will present a unified, comprehensive plan to address the overlapping challenges we face in a fiscally and economically responsible way.

For complete information on the President’s FY 2022 discretionary funding request, please visit: <https://www.whitehouse.gov/omb/FY-2022-Discretionary-Request/>. At a topline level, the \$1.5 trillion budget plan includes \$769 billion in nondefense discretionary funding, a 16% increase over the Fiscal Year 2021 (FY21) enacted level, and \$753 billion, a 1.7% increase, for defense funding.

U.S. Department of Education

- **Topline:** \$102.8 billion, a \$29.8 billion, or 41%, increase over the FY21 level.

U.S. Department of Health and Human Services

- **Topline:** \$131.7 billion, a \$25 billion or 23.5% increase from the FY21 level.
- **National Institutes of Health:** \$51 billion, a \$9 billion increase over FY21
 - **New Advanced Research Projects Agency for Health (ARPA-H):** \$6.5 billion to launch ARPA-H. With an initial focus on cancer and other diseases such as diabetes and Alzheimer’s, this major investment in Federal research and development would drive transformational innovation in health research and speed application and implementation of health breakthroughs.
- **Help End the Opioid Epidemic:** \$10.7 billion, an increase of \$3.9 billion over the FY21 level, to support research, prevention, treatment, and recovery support services, with targeted investments to support populations with unique needs, including Native Americans, older Americans, and rural populations.

U.S. Department of Commerce

- **Topline:** \$11.4 billion, a \$2.5 billion or 28% increase from the FY21
- **National Oceanic and Atmospheric Administration:** \$6.9 billion, a \$1.4 billion increase over FY21. Specifically, \$800 million to expand investments in climate research, support regional and local decision-making with climate data and tools, and improve community resilience to climate change.
- **National Institute of Standards and Technology:** \$916 million, a \$128 million increase from FY21, for scientific and technological research in climate-resilient building codes, computing, cybersecurity, and artificial intelligence, quantum information science, biotechnology, and advanced manufacturing, and to establish prize competitions to pursue key technology goals to benefit all Americans

U.S. Department of Energy (DOE)

- **Topline:** \$46.1 billion, a \$4.3 billion or 10.2% increase from FY21
- **Office of Science:** \$7.4 billion, an increase of more than \$400 million over the FY21 level, to better understand the changing climate; identify and develop novel materials and concepts for clean energy technologies of the future; advance artificial intelligence and computing to enhance prediction and decision making across numerous environmental and scientific challenges; and support the National Laboratory network with cutting-edge scientific facilities.
- **Spurs Innovation in Clean Energy Technologies:** \$8 billion, an increase of at least 27% over FY21, in technology such as advanced nuclear energy technologies, electric vehicles, green hydrogen, and even innovative approaches to air conditioning and refrigeration.
- **Drives Breakthrough Solutions in Climate Innovation and Clean Energy:** \$1 billion to create a new Advanced Research Projects Agency for Climate and invest in the existing Advanced Research Projects Agency-Energy of which \$700 million is funding through DOE.

National Science Foundation (NSF)

- **Topline:** \$10.2 billion, a \$1.7 billion or 20% increase over the FY21 level
- **New Directorate for Technology, Innovation, and Partnerships:** The Directorate would work with programs across the Agency and with other existing Federal and non-Federal entities to expedite technology development in emerging areas that are crucial for U.S. technological leadership, including artificial intelligence, high performance computing, disaster response and resilience, quantum information systems, robotics, advanced communications technologies, biotechnology, and cybersecurity.
- **Enhances Fundamental Research and Development:** \$9.4 billion, an increase of \$1.6 billion above the FY21 level, to support research across the spectrum of science, engineering, and technology, including biological sciences, computer and information sciences, engineering, geosciences, math and physical sciences, social, behavioral, and economic sciences, and education.
- **Advances Climate Science and Sustainability Research:** \$1.2 billion for climate and clean energy related research, an increase of \$500 million above the FY21 level. NSF would fund a broad portfolio of research related to climate science and clean energy, including research on atmospheric composition, water and carbon cycles, modeling climate systems, renewable energy technologies, materials sciences, and social, behavioral, and economic research on human responses to climate change.

A summary of the specific agency funding increases is available on the on the [GovExec website](#).

[Back to Contents](#)

[Webinar and Events](#)

Event: Robotics Program Webinar for CAREER Principal Investigators

Sponsor: NSF

When: April 26, 2021, 3.00 PM – 4.30 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302318&org=NSF

Brief Description: The [Foundational Research in Robotics program](#) is holding a webinar for prospective [CAREER](#) principal investigators on April 26, 2021, starting at 3:00 PM Eastern Time.

To Join the Webinar: Please register in advance and submit your questions at: https://nsf.zoomgov.com/webinar/register/WN_Js6oOXw9RweqvK5u4b47_g

Event: Engineering Research Initiation Webinar

Sponsor: NSF

When: April 29, 2021, 1.30 PM – 3.30 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302362&org=NSF

Brief Description: The NSF Directorate for Engineering will hold a webinar on April 29, 2021, at 1:30 P.M. ET on the new [Engineering Research Initiation \(ERI\) program](#).

The ERI programs aims to support new investigators as they begin their research programs and advance in their careers as researchers, educators, and innovators. The program will help NSF build engineering research capacity across the nation by investing in new academic investigators who have yet to receive research funding from Federal Agencies.

This funding opportunity also aims to broaden the base of investigators involved in engineering research and therefore is limited to investigators that are not affiliated with “very high research activity” R1 institutions (according to the [Carnegie Classification](#)). Proposers may submit proposals only in engineering research areas supported by programs within the Divisions of the Directorate for Engineering.

To Join the Webinar: [Register here for the ERI webinar.](#)

Event: NSF CAREER Program Webinars

Sponsor: NSF

When: May 14, 2021; 1:00 PM - 3:00 PM; May 20, 2021; 1:00 PM - 3:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302474&org=NSF

Brief Description: NSF is providing information on the [NSF Faculty Early Career Development \(CAREER\) program solicitation NSF 20-525](#) at webinars on Friday, May 14, and Thursday, May 20, 2021, starting at 1:00 pm Eastern time each day.

The NSF-wide CAREER program supports early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. Activities pursued by early-career faculty should build a firm foundation for a lifetime of leadership in integrating education and research.

Both webinars will include a briefing on the CAREER program and key solicitation requirements followed by a question and answer session. Prior to the webinar, you can submit questions to [NSF CAREER Webinar Questions](#).

Please review the CAREER program [solicitation](#) and [FAQs](#) before the webinar.

To Join the Webinar: Register in advance for the webinar at https://nsf.zoomgov.com/webinar/register/WN_CdBfoDo9QqCEV2h3roKiGQ

- Meeting ID: 161 946 8470
- Passcode: 176334

Event: NSF Virtual Grants Conference

Sponsor: NSF

When: June 7, 2021 1:00 PM to June 11, 2021 4:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302504&org=NSF

Brief Description: Join the National Science Foundation for the [Spring 2021 NSF Virtual Grants Conference](#), to be held during the week of **June 7-11, 2021**.

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
- NSF Directorate sessions
- Future directions and strategies for national science policy
- Proposal preparation
- NSF's merit review process
- Conflict of interest policies

The conference is designed to give new faculty, researchers, and administrators key insights into a wide range of current issues at NSF. NSF program officers will provide up-to-date information about specific funding opportunities and answer attendee questions.

Registration will be free of charge and opens on Wednesday, **May 5 at 12 p.m. EST**. For those who cannot attend the live conference, all recorded conference sessions will be available on-demand shortly after the event

To Join the Webinar: Register in advance at <https://nsfpolicyoutreach.com/spring-21-virtual-conf/> on or after May 5, 2021.

[Back to Contents](#)

Grant Opportunities

National Science Foundation

Grant Program: Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR)

Agency: National Science Foundation NSF 21-579

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21579/nsf21579.htm>

Brief Description: The National Science Foundation (NSF) plays a leadership role in developing and implementing efforts to enhance and improve STEM education in the United States. Through the NSF *Improving Undergraduate STEM Education* (IUSE) initiative, the agency continues to make a substantial commitment to the highest caliber undergraduate STEM education through a Foundation-wide framework of investments. The IUSE: EHR is a core NSF STEM education program that seeks to promote novel, creative, and transformative approaches to generating and using new knowledge about STEM teaching and learning to improve STEM education for undergraduate students. The program is open to application from all institutions of higher education and associated organizations. NSF places high value on educating students to be leaders and innovators in emerging and rapidly changing STEM fields as well as educating a scientifically literate public. In pursuit of this goal, IUSE: EHR supports projects that seek to bring recent advances in STEM knowledge into undergraduate education, that adapt, improve, and incorporate evidence-based practices into STEM teaching and learning, and that lay the groundwork for institutional improvement in STEM education. In addition to innovative work at the frontier of STEM education, this program also encourages replication of research studies at different types of institutions and with different student bodies to produce deeper knowledge about the effectiveness and transferability of findings.

IUSE: EHR also seeks to support projects that have high potential for broader societal impacts, including improved diversity of students and instructors participating in STEM education, professional development for instructors to ensure adoption of new and effective pedagogical techniques that meet the changing needs of students, and projects that promote institutional partnerships for collaborative research and development. IUSE: EHR especially welcomes proposals that will pair well with the efforts of NSF INCLUDES (https://www.nsf.gov/news/special_reports/nsfincludes/index.jsp) to develop STEM talent from all sectors and groups in our society.

For all the above objectives, the National Science Foundation invests primarily in evidence-based and knowledge-generating approaches to understand and improve STEM learning and learning environments, improve the diversity of STEM students and majors, and prepare STEM majors for the workforce. In addition to contributing to STEM education in the host institution(s), proposals should have the promise of adding more broadly to our understanding of effective teaching and learning practices.

The IUSE: EHR program features two tracks: (1) Engaged Student Learning and (2) Institutional and Community Transformation. Several levels of scope, scale, and funding are available within each track, as summarized in Table 1.

Table 1: Overview of Engaged Student Learning and Institutional and Community Transformation tracks, levels, and deadlines

Track	Level	Deadlines
Engaged Student Learning	Level 1: up to \$300,000 for up to three years	July 21, 2021
		January 19, 2022 3 rd Wednesday in January and July thereafter

	Level 2: \$300,001 - \$600,000 for up to three years	July 21, 2021 3 rd Wednesday in July thereafter
	Level 3: \$600,001 - \$2 million for up to five years	July 21, 2021 3 rd Wednesday in July thereafter
Institutional and Community Transformation	Capacity-Building: \$150K (single institution) or \$300K (multiple institutions) for up to two years	July 21, 2021 January 19, 2022 3 rd Wednesday in January and July thereafter
	Level 1: up to \$300,000 for up to three years	July 21, 2021 January 19, 2022 3 rd Wednesday in January and July thereafter
	Level 2: \$300,001 - \$2 million (single institution) or \$3 million (multiple institutions and research centers) for up to five years	July 21, 2021 3 rd Wednesday in July thereafter

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: \$63,000,000

Letters of Intent: Not Required

Full Proposal Submission Deadline: July 21, 2021

Contacts: Ellen Carpenter, telephone: (703) 292-5104, email: elcarpen@nsf.gov

- Keith A. Sverdrup, telephone: (703) 292-4671, email: ksverdru@nsf.gov
- John Jackman, telephone: (703) 292-4816, email: jjackman@nsf.gov

Grant Program: Racial Equity in STEM Education (EHR Racial Equity)

Agency: National Science Foundation NSF PD 21-191Y

RFP Website:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505910&org=NSF&sel_org=NSF&from=fund

Brief Description: Persistent racial injustices and inequalities in the United States have led to renewed concern and interest in addressing systemic racism. The National Science Foundation (NSF) Directorate for Education and Human Resources (EHR) seeks to support bold, ground-breaking, and potentially transformative projects addressing systemic racism in STEM. Proposals should advance racial equity in science, technology, engineering, and mathematics (STEM) education and workforce development through research (both fundamental and applied) and practice. Core to this funding opportunity is that proposals are led by, or developed and led in authentic partnership with, individuals and communities most impacted by the inequities caused by systemic racism. The voices, knowledge, and experiences of those who have been impacted by enduring racial inequities should be at the center of these proposals, including in, for example: project leadership and research positions, conceptualization of the proposal, decision-making processes, and the interpretation and dissemination of evidence and research results. The proposed work should provide positive outcomes for the individuals and communities engaged and should recognize peoples' humanity, experiences, and resilience. Proposals need to consider systemic barriers to opportunities and benefits, and how these barriers impact access to, retention in, and success in STEM education, research, and workforce development. Competitive proposals will be clear with respect to how the work advances racial equity and addresses systemic racism, as these constructs may have different meanings in different settings.

Collectively, proposals funded by this Program Description will: (1) advance the science and promotion of racial equity in STEM, (2) substantively contribute to removing systemic barriers that impact STEM education, the STEM workforce, and scientific advancement, (3) institutionalize effective and inclusive environments for STEM learning, STEM research, and STEM professionals, (4) diversify the project leadership (PIs and co-PIs), institutions, ideas, and approaches that NSF funds, and (5) expand the array of epistemologies, perspectives, and experiences in STEM.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: Up to \$4,400,000

Letters of Intent: Prospective PIs are encouraged to send a one-page concept paper to EHRRAcialequityPD@nsf.gov in advance of submitting a proposal.

Full Proposal Submission Deadline: July 13, 2021; October 12, 2021

Contacts: Please contact EHRRAcialequityPD@nsf.gov (703) 292-5009

Grant Program: Trans-Atlantic Platform Recovery, Renewal, and Resilience in a Post-Pandemic World (T-AP RRR)

Agency: National Science Foundation NSF PD 21-188Y

RFP Website:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505909&org=NSF&sel_org=NSF&from=fund

Brief Description: The Trans-Atlantic Platform Recovery, Renewal, and Resilience in a Post-Pandemic World (T-AP RRR) opportunity supports international, collaborative research projects that address key gaps in our understanding of the complex societal effects of COVID-19. Specifically, T-AP RRR supports research that addresses one or more of the following challenges: reducing inequalities and vulnerabilities; building a more resilient, inclusive, and sustainable society; fostering democratic governance and participation; advancing responsible and inclusive digital innovation; and/or ensuring effective and accurate communication and media.

Proposals requesting NSF funding must fit within the scientific purview of the NSF Directorate for Social, Behavioral and Economic Sciences (SBE). Proposers are strongly encouraged to consult [SBE's programs](#) and contact the cognizant program director (see Contacts, above) to discuss their proposals' fit within NSF/SBE's purview prior to submission of the international team proposal to the T-AP RRR Call.

International Team Composition

T-AP RRR supports collaborative research teams from four continents: Africa (Republic of South Africa); Europe (Croatia, Finland, France, Germany, Poland, Switzerland, and the United Kingdom); North America (Canada, the United States); and South America (Brazil and Colombia). Teams must include researchers based in at least three participating T-AP RRR countries and must include partners from both sides of the Atlantic, *i.e.*, from Europe/Africa and the Americas.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: Up to \$4,400,000

Letters of Intent: Please see below.

Full Proposal Submission Deadline: The full T-AP RRR Call for Proposals, details about eligibility, and instructions for preparing and submitting proposals will be available on the [T-AP website](#) on April 12, 2021. International team proposals must first be submitted via the SAGE system hosted by the São Paulo Research Foundation. The link to the SAGE system can be found on the [T-AP website](#). The submission deadline is July 12, 2021.

Contacts: Kwabena Gyimah-Brempong kgyimahb@nsf.gov (703) 292-7466

Grant Program: Alliances for Graduate Education and the Professoriate (AGEP)

Agency: National Science Foundation NSF 21-576

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21576/nsf21576.htm>

Brief Description: The NSF's Alliances for Graduate Education and the Professoriate (AGEP) program contributes to the National Science Foundation's objective to foster the growth of a more capable and diverse research workforce.¹ Through this solicitation, the NSF seeks to build on prior AGEP work, and other research and literature concerning racial and ethnic equity, in order to address the *AGEP program goal to increase the number of historically underrepresented minority faculty in STEM.*² Furthering the AGEP goal requires advancing knowledge about new academic STEM career pathway models, and about evidence-based systemic or institutional change initiatives to promote equity and the professional advancement of the AGEP populations who are pursuing, entering and continuing in non-tenure and tenure-track STEM faculty positions. The use of the term "historically underrepresented minority" reflects language from Congress, and in the context of the AGEP program, the AGEP populations are defined as STEM doctoral candidates, postdoctoral scholars and faculty, who are African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. The terms for these racial and ethnic populations are derived from the US government's guidance for federal statistics and administrative reporting. At the graduate student level, only doctoral candidates are included because they have greater potential to enter a faculty position within the project duration time frame. This solicitation includes three funding tracks that all support the AGEP program goal. All tracks require collaborative IHE teams to use an intersectional lens as they address systemic and institutional change strategies at IHEs to promote equity for AGEP populations.

- The ***AGEP Institutional Transformation Alliance (ITA)*** track is designed to support the development, implementation, and evaluation of *innovative* systemic and institutional change strategies that promote equity for AGEP populations, within similar IHEs. ITAs will create permanent policy and practice changes that advance AGEP populations, and the project work is expected to be sustained after NSF funding expires. Please note that a preliminary proposal to the ITA track is required, and that at least one of the institutions submitting must first have or have had an AGEP Catalyst Alliance. The proposing IHEs represented in the preliminary ITA proposal must be the same collaborating IHEs who will plan to submit a full ITA proposal, if invited by NSF to submit the full ITA. Please read the full solicitation for details about ITA Preliminary and Full proposal submissions that begin in FY2022.
- The ***AGEP Faculty Career Pathways Alliance Model (FC-PAM)*** track is intended to support the development, implementation, evaluation, and institutionalization of Alliance models that will advance AGEP populations, within similar IHEs. The FC-PAM collaborators must also self-study into how socio-cultural, economic, structural, leadership and institutional variables affect the formation of the FC-PAM Alliance, and the strategies or interventions the collaborators implement to advance the AGEP populations. A Letter of Intent (LOI) is required **ONLY** for IHEs that plan to submit an FC-PAM collaborative proposal, and only one LOI is needed for the collaborating research institutions that plan to submit the FC-PAM proposal. The FC-PAM track will only be available in FY2021-FY2022 and it will be discontinued thereafter.
- The ***AGEP Catalyst Alliance (ACA)*** track supports the design and implementation of one or more organizational self-assessment(s) to collect and analyze data that will identify inequities affecting the AGEP populations; pilot equity strategies as appropriate; and develop a five-year equity strategic plan for the AGEP populations. The ACA is meant as a facilitator grant to help similar IHEs generate the foundational work necessary to initiate an ITA project.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: Up to \$4,400,000

Letters of Intent: Required by June 02, 2021

Preliminary Proposal Deadline (due by 5 p.m. submitter's local time): February 08, 2022

Full Proposal Submission Deadline: August 17, 2021

Contacts: Mark H. Leddy, Lead Program Director, telephone: (703) 292-4655, email: mleddy@nsf.gov

- Sandra Romano, Program Director, telephone: (703) 292-5064, email: sromano@nsf.gov

- Carrie Hall, Program Director, telephone: (703) 292-4641, email: carhall@nsf.gov
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Grant Program: Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowships (MPS-Ascend)

Agency: National Science Foundation NSF 21-573

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21573/nsf21573.htm>

Brief Description: The purpose of the Mathematical and Physical Sciences Ascending Postdoctoral Research Fellowship (MPS-Ascend) program is to support postdoctoral Fellows who will broaden the participation of groups that are underrepresented in MPS fields in the U.S. including Blacks or African Americans, Hispanics, Latinos, and Native Americans (to include Alaska Natives, Native Hawaiians or other Native Pacific Islanders) as future leaders in MPS fields. The program is intended to recognize beginning investigators of significant potential and provide them with experience in research that will broaden perspectives, facilitate interdisciplinary interactions and help broadening participation within MPS fields. The program funds postdoctoral Fellows in postdoctoral research environments that will have maximal impact on their future scientific development and facilitates their transition into a faculty appointment. Awards will support research in any scientific area within the purview of the five MPS Divisions: the Divisions of Astronomical Sciences (AST), Chemistry (CHE), Materials Research (DMR), Mathematical Sciences (DMS), and Physics (PHY). Fellowships are awards to individuals, not institutions, and are administered by the Fellows.

Awards: Individual Fellowships; Anticipated Funding Amount: \$5,000,000

Letters of Intent: Not Required

Proposal Submission Deadline: June 15, 2021

Contacts: Harshal Gupta, AST, telephone: (703) 292-5039, email: hgupta@nsf.gov

- Rebecca Peebles, CHE, telephone: (703) 292-8809, email: rpeebles@nsf.gov
-

Grant Program: NSF Convergence Accelerator Phases I and II for the 2021 Cohort

Agency: National Science Foundation NSF 21-572

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21572/nsf21572.htm>

Brief Description: The NSF Convergence Accelerator program addresses national-scale societal challenges through use-inspired [convergence research](#). Using a convergence approach and innovation processes like human-centered design, user discovery, and team science and integration of multidisciplinary research, the Convergence Accelerator program seeks to transition basic research and discovery into practice—to solve high-impact societal challenges aligned with specific research themes (tracks).

NSF Convergence Accelerator tracks are chosen in concordance with the themes identified during the program's ideation process that have the potential for significant national impact. The NSF Convergence Accelerator implements a two-phase program. Both phases are described in this solicitation and are covered by this single solicitation and corresponding Broad Agency Announcement. The link to the Broad Agency Announcement can be found [here](#). The purpose of this parallel activity is to provide increased opportunities for proposals that are led by non-academic entities. Proposals that are led by Institutions of Higher Education (IHEs), non-profits, independent museums, observatories, research labs, professional societies and similar organizations should respond to this solicitation. Proposals led by for-profit or similar organizations should respond to the BAA. Phase I awardees receive significant resources to further develop their convergence research ideas and to identify important partnerships and resources to accelerate their projects, leading to deliverable research prototypes in Phase II.

This solicitation for FY 2021 invites proposals for the following Track Topics:

Networked Blue Economy (Track E): The overarching goal of Track E is to interconnect the Blue Economy and accelerate convergence across ocean sectors. This track aims to create a smart, integrated, connected, and open ecosystem for ocean innovation, exploration, and sustainable utilization.

Trust & Authenticity in Communications Systems (Track F): The overarching goal of Track F is to develop prototype(s) of novel research platforms forming integrated collection(s) of tools, techniques, and educational materials and programs to support increased citizen trust in public information of all sorts (health, climate, news, etc.), through more effectively preventing, mitigating, and adapting to critical threats in our communications systems.

Letters of Intent should identify a team with the appropriate mix of disciplinary and cross-sector expertise required to build a convergence research effort. Letters of Intent must identify one or more deliverables, how those research outputs could impact society at scale, and the team that will be formed to carry this out. Phase I proposals must describe the deliverables, a research plan, and the process of team formation that will help lead to a proof-of-concept during Phase I.

If selected, Phase I awards may receive funding up to \$750,000 for 12 months duration, of which nine months includes intense hands-on activities, centering around the Program's innovation curriculum (for additional details regarding the innovation curriculum refer to section V.A.), and three months of other activities such as participation in the NSF Convergence Accelerator Pitch Presentations and Expo.

Only awardees of Phase I awards under this solicitation may submit a Phase II proposal. Phase II proposals must outline a 24-month research and development plan that transitions research into practice through convergence activities, multi-sector partnerships, and collaboration with other partners and end-users. Phase II awards may be up to \$5 million for 24 months.

Awards: Standard Grant or Cooperative Agreement; Anticipated Funding Amount: \$22,000,000

Letters of Intent: Proposers are required to submit a Letter of Intent by May 05, 2021 in order to submit a Phase I Full Proposal.

Proposal Submission Deadline: June 14, 2021 for Phase I Full Proposals

May 25, 2022 for Phase II Full Proposals, only Phase I awardees are eligible to apply

Contacts: Chaitanya K. Baru, telephone: (703) 292-2473, email: cbaru@nsf.gov

- Lara A. Campbell, telephone: (703) 292-7049, email: lcampbel@nsf.gov
- Pradeep P. Fulay, telephone: (703) 292-2445, email: pfulay@nsf.gov

[Back to Contents](#)

[National Institutes of Health](#)

Grant Program: NIH Blueprint and BRAIN Initiative Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award (F99/K00 Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-NS-21-012

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-21-012.html>

Brief Description: The D-SPAN F99/K00 award is intended for individuals who have demonstrated an interest in a neuroscience research career in [NIH Blueprint](#) mission-relevant areas and/or [BRAIN Initiative](#) research areas. Note that NIDCD participation is limited to BRAIN Initiative research areas only; NIDCD does not participate in the NIH Blueprint. At the time of award, applicants are expected to require 1-2 years to complete their PhD dissertation research training (F99 phase) before transitioning to mentored postdoctoral research training (K00 phase). The two award phases are intended to be continuous in time. Consequently, applicants are expected to propose an individualized research training plan for the next 1-2 years of dissertation research training and a plan for 3-4 years of mentored postdoctoral research

training and career development activities that will prepare them for independent neuroscience-focused research careers.

The D-SPAN F99/K00 award is meant to provide up to 6 years of support in two phases. The initial phase (F99) will provide support for the final 1-2 years of dissertation research in a neuroscience related field (including final experiments, dissertation preparation) and the search for/selection of a postdoctoral mentor. The second phase (K00) will provide up to 4 years of mentored postdoctoral research career development support and is contingent upon successful completion of the doctoral degree requirements. A K00 award will be made only to a PD/PI who has successfully completed the F99-supported training, secured an appropriate neuroscience postdoctoral position, and has provided the D-SPAN oversight committee with a strong research and career development plan that will occur in a supportive and competitive research environment.

Prospective applicants are strongly encouraged to contact the Program Official prior to initiating plans for application submission. Additional resources and answers to frequently asked questions can also be found here: <https://neuroscienceblueprint.nih.gov/training/nih-blueprint-d-span-award-f99k00>

Awards: For the F99 phase award budgets are composed of stipends, tuition and fees, and institutional allowance. For the K00 phase, award budgets are composed of salaries and fringe benefits, research and career development support, and indirect costs.

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

Proposal Submission Deadline: December 15, 2021; April 15, 2022; December 15, 2022; April 14, 2023; December 15, 2023.

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

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

Contact: Michelle Jones-London, PhD, National Institute of Neurological Disorders and Stroke (NINDS); Telephone: 301-451-7966; Email: jonesmiche@ninds.nih.gov

Grant Program: NIH Director's Pioneer Award Program (DP1 Clinical Trial Optional)

Agency: National Institutes of Health RFA-RM-21-015

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-21-015.html>

Brief Description: In the Pioneer Award program, emphases are on the qualities of the investigator, the innovativeness, and potential impact of the proposed research. Preliminary data and detailed experimental plans are not requested. To be considered pioneering and as an aspect of innovativeness, the proposed research must reflect substantially different ideas from those being pursued in the investigator's current research program or elsewhere. The Pioneer Award is not intended to expand a current research program into the area of the proposed project. While the research direction may rely on the applicant's prior work and expertise as its foundation, it cannot be an obvious extension or scale-up of a current research enterprise. Rather, the proposed project must reflect a fundamental new insight which may involve exceptionally innovative approaches and/or radically unconventional hypotheses. Applications for projects that are straightforward extensions of ongoing research should not be submitted.

Pioneer awardees are required to commit the major portion (more than 6 person-months or at least 51%) to activities supported by the Pioneer Award research project in the first three years of the project period. Effort expended toward teaching, administrative, or clinical duties should not be included in this calculation. Awardees may reduce effort to a minimum of 4 person-months (33%) and a minimum of 3 person-months (25%) in the fourth and fifth years, respectively, to help them transition to other sources of support since Pioneer Awards cannot be renewed. Applicants with current research commitments equal to 6 person-months or more must adjust their effort on existing grants during the award period to devote

the required minimum effort to the Pioneer Award project. Investigators who will not be able to meet this requirement should not submit applications.

Awards: Awards will be for \$700,000 in direct costs per year, plus applicable Facilities and Administrative (F&A) costs.

Letter of Intent: Not Applicable

Proposal Submission Deadline: September 10, 2021

Contact: Ravi Basavappa, Ph.D., Office of the Director (OD), Telephone: 301-435-7204

Email: PioneerAwards@mail.nih.gov

Grant Program: Bridges to the Doctorate Research Training Program (T32)

Agency: National Institutes of Health PAR-21-198

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-21-198.html>

Brief Description: The Overarching Objective of this Bridges to the Doctorate Research Training Program is to develop a diverse pool of well-trained biomedical scientists who will transition from master's degree programs and complete rigorous biomedical, research-focused doctoral degree programs (e.g., Ph.D. or M.D./Ph.D.) in biomedical fields relevant to the [NIGMS mission](#). The long-term goal is to develop a diverse pool of well-trained biomedical scientists, who have the following technical, operational, and professional skills:

- A broad understanding across biomedical disciplines and the skills to independently acquire the knowledge needed to advance their chosen fields;
- Expertise in a biomedical scientific discipline and the skills to think critically and independently, and to identify important biomedical research questions and approaches that push forward the boundaries of their areas of study;
- A strong foundation in scientific reasoning, rigorous research design, experimental methods, quantitative and computational approaches, and data analysis and interpretation;
- The skills to conduct research in the safest manner possible, and a commitment to approaching and conducting biomedical research responsibly, ethically, and with integrity;
- Experience initiating, conducting, interpreting, and presenting rigorous and reproducible biomedical research with increasing self-direction;
- The ability to work effectively in teams with colleagues from a variety of cultural and scientific backgrounds, and to promote inclusive and supportive scientific research environments;
- The skills to teach and communicate scientific research methodologies and findings to a wide variety of audiences (e.g., discipline-specific, across disciplines, and the public); and
- The knowledge, professional skills and experiences required to identify and transition into careers in the biomedical research workforce (i.e., the breadth of careers that sustain biomedical research in areas that are relevant to the NIH mission).

Diversity at all levels—from the kinds of science to the regions in which it is conducted to the backgrounds of the people conducting it—contributes to excellence in research training environments and strengthens the research enterprise. This FOA is intended to support outstanding research training programs that will enhance diversity in the biomedical research workforce. As part of NIGMS' strategy to support the development of a diverse pool of well-trained biomedical scientists across the training pathway, the Bridges to the Doctorate Research Training Program will support trainees enrolled full-time at institutions with terminal master's degrees in the biomedical sciences to transition into and complete biomedically relevant Ph.D. programs within partnering research-intensive institutions.

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

Letter of Intent: Not Applicable

Proposal Submission Deadline: September 28, 2021

Contact: Sydella Blatch, Ph.D.; National Institute of General Medical Sciences (NIGMS); Email: sydella.blatch@nih.gov

Grant Program: BRAIN Initiative: Targeted BRAIN Circuits Projects- TargetedBCP (R01 Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-NS-21-013

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-21-013.html>

Brief Description: The primary goal of this FOA is to solicit research projects that seek to understand how circuit activity gives rise to mental experience and behavior using innovative, methodologically-integrated approaches. Applicants should seek to demonstrate how new and advanced experimental capabilities, integrated methodology, and multidisciplinary expertise can be used to transform the general understanding of neural information processing within the context of specific systems or circuits. This FOA instructs applicants and reviewers that projects more adventurous and innovative than traditional NIH applications are encouraged. Experimental goals should focus on questions of fundamental neurobiology that informs how the normal nervous system works, and can include natural and experimental perturbations that provide mechanistic tests about circuit functions. Projects must include a quantifiable behavior, or behavior of a well-defined neural system. Approaches must offer to identify, record, and/or manipulate identified circuits involved in the behavior with sufficient coverage to capture circuit level dynamics and mechanisms beyond individual cells or synapses. Model-driven experimental design and/or computational approaches should be used to frame mechanistic questions about circuit functions. Results must include a predictive model at a computational or conceptual level of understanding. Multi-scale approaches, from biophysics to social contexts, are encouraged to enable an understanding of mechanisms at the meso-scale, circuit level. Diverse species or experimental systems and a cross-species/comparative approach are welcome and should be chosen based on their power to address the specific question at hand and to reveal generalizable and fundamental principles.

Targeted BRAIN Circuit Project R01 awards will support an individual laboratory or a small multi-PD/PI team. Supported projects will reflect the NIH BRAIN Initiative interests in the application of cutting-edge methodologies in the service of understanding central nervous system circuit function at cellular and sub-second levels of resolution in ethologically relevant behaviors of an organism or a well-defined neural system. Applications should offer specific, feasible, and potentially transformative research goals as endpoints within a 5-year term.

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: July 07, 2021; November 10, 2021

Contact: Karen K David, PhD

National Institute of Neurological Disorders and Stroke (NINDS); Telephone: 301-496-9964; Email: BRAINcircuits@NIH.GOV

Grant Program: NINDS Faculty Development Award to Promote Diversity in Neuroscience Research (K01 Clinical Trial Required)

Agency: National Institutes of Health PAR-21-153

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-21-153.html>

Brief Description: The objective of the NIH Mentored Research Scientist Development Award (K01) is to provide salary and research support for a sustained period of “protected time” (3-5 years) for intensive research career development, under the guidance of an experienced mentor, or sponsor in the biomedical,

behavioral or clinical sciences leading to research independence. The expectation is that, through this sustained period of research career development and training, awardees will launch independent research careers and become competitive for new research project grant (e.g., R01) funding.

The purpose of the Faculty Development Award to Promote Diversity in Neuroscience Research is to support an intensive, supervised career development and scientific mentoring experience for promising junior investigators (who are 1) in first 3 years of a faculty tenure track or equivalent position at the time of application or 2) have an offer for a first-time tenure-track or equivalent faculty position that will begin by time of award) from diverse backgrounds, including those from groups underrepresented in biomedical research. The proposed career development experience is expected to substantially contribute to the research capabilities of the applicant, provide protected time from teaching/other duties and provide resources to hone skills in grant writing and publication of high impact research.

Awards: Award budgets are composed of salary and other program-related expenses.

Letter of Intent: Not Applicable

Proposal Submission Deadline: NIH [standard due dates](#)

Contact: Michelle Jones-London, Ph.D.; National Institute of Neurological Disorders and Stroke (NINDS); Telephone: 301-451-7966; Email: jonesmiche@ninds.nih.gov

[Back to Contents](#)

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

Grant Program: Air Force Fiscal Year 2022 Young Investigator Research Program (YIP)

Agency: Department of Defense Air Force Office of Scientific Research FOA-AFRL-AFOSR-2021-0006

Website: <https://community.apan.org/wg/afosr/w/researchareas/12792/young-investigator-program-yip/>

Brief Description: The Fiscal Year 2022 Air Force Young Investigator Research Program (YIP) intends to support young in career scientists and engineers who have received Ph.D. or equivalent degrees by 1 April 2015 or later showing exceptional ability and promise for conducting basic research. The program objective is to foster creative basic research in science and engineering; enhance early career development of outstanding young investigators; and increase opportunities for the young investigator to recognize the Air Force mission and related challenges in science and engineering.

Awards: Multiple awards. Award Ceiling: \$450,000.

Letter of Intent: Please see below.

Proposal Deadline:

Pre-Solicitation YIP questions due	30 Apr 2021
Pre-Solicitation YIP answers posted	14 May 2021
White Paper submissions due	31 May 2021
White Paper PO responses due	14 Jun 2021
Full Proposals due	12 Jul 2021

Contact Information: Ellen M. Robinson, AFOSR; Email: afosryip@us.af.mil

Grant Program: Biological Technologies**Agency: Department of Defense DARPA - Biological Technologies Office HR001121S0025****Website:** <https://beta.sam.gov/opp/dfe93a5637fc419a8ea392ee949f9c79/view>

Brief Description: The mission of BTO is to foster, demonstrate, and transition breakthrough research, discoveries, and applications that integrate biology, engineering, computer science, mathematics, and the physical sciences. BTO's research investment portfolio includes combating pandemic disease, innovative physiological interventions, human performance and warfighter readiness, and deep exploration of changing ecologies and environments for improving U.S. capabilities and resilience. BTO's programs operate across a wide range of scales, from individual cells to the warfighter to global ecosystems. BTO responds to the urgent and long-term needs of the Department of Defense (DoD) and addresses national security priorities.

Awards: Multiple awards.

Letter of Intent: Please see below.

Proposal Deadline: Proposal Abstract Due Date and Time: Abstracts may be submitted on a rolling basis until 4:00 PM ET, April 20, 2022 o Full Proposal Due Date and Time: Proposals may be submitted on a rolling basis until 4:00 PM ET, April 20, 2022

Contact Information: The BAA Coordinator for this effort may be reached at:

BTOBAA2021@darpa.mil

Grant Program: CENTER OF EXCELLENCE (COE): Brain-Derived Neuromorphic Computing with Intelligent Materials**Agency: Department of Defense Air Force Office of Scientific Research FOA-AFRL-AFOSR-2021-0005****Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332883>

Brief Description: This Center of Excellence is anticipated to extend the research interests of AFRL in the topical area of neuromorphic computing and provide opportunities for a new generation of US scientists and engineers to address United States Space Force (USSF) and United States Air Force (USAF) research needs. This is a special FOA because it explicitly calls for (a) research in the highpriority Air Force interest areas of neuroscience, neuromorphic computing, and nanomaterials; and (b) education of students within the US in vital technology areas with opportunities for potential recruitment of US nationals for employment at AFRL. In conjunction with AFRL, AFOSR invites proposals for research in the areas described in detail below. The schedule for this announcement is given in Section B, Federal Award Information. This research effort will consist of multidisciplinary teams of researchers with the skills needed to address the relevant research challenges necessary to meet the program's goals. Multiinvestigator teaming is encouraged. Multi-university teams are allowed. Under no circumstances will the Government help to create teams.

Awards: Multiple awards. Up to \$1,000,000 per year funding.

Letter of Intent: Please see below.

Proposal Deadline: A Proposer's Day will be held virtually on 03 May 2021 for the purpose of facilitating teaming among prospective proposers. The Government is not responsible for and will not assist with team creation. Advance registration is required at <https://community.apan.org/wg/afosr/w/researchareas/29659/2021-afri-center-of-excellence-inbrain-derived-neuromorphic-computing-with-intelligent-materials-proposer-s-day/>. If requesting a 5-minute slot for an "elevator pitch" presentation to all attendees, you must register by 28 April 2021. Slots will be reserved on a first-come, first-served basis. Proposer's Day presentations are intended for soliciting teaming relationships, are not a prerequisite for responding to this FOA, and will not influence white

paper or proposal evaluations. Presenters' slides will be made publicly accessible at the registration website following the event.

Pre-proposal inquiries and questions must be received in writing by electronic mail not later than 07 May 2021 at 11:59 PM Eastern Daylight Time (EDT) to be considered. White papers must be submitted electronically at <https://community.af.mil/wg/afosr/p/submitwhitepaper> by 01 June 2021 at 11:59 PM Eastern Daylight Time to be considered.

Proposals must be received electronically through Grants.gov by 16 August 2021 at 11:59 PM Eastern Daylight Time to be considered.

Contact Information: DR. HAL S. GREENWALD, AFOSR/RTA; Cognitive & Computational Neuroscience; Telephone: (703) 588-8441; Email: hal.greenwald@us.af.mil

Grant Program: Defense Manufacturing Communities Support Program

Agency: Department of Defense OLDCC-21-F-0001

Website: <https://oldcc.gov/Defense-Manufacturing-Community-Support-Program>

Brief Description: The DMCSPP is designed to support long-term community investments that strengthen national security innovation and expand the capabilities of the defense manufacturing industrial ecosystem. The Defense Manufacturing Community Support Program (DMCSPP) is authorized under Section 846 of Public Law 115-232. The program was developed in collaboration with the Office of the Deputy Assistant Secretary of Defense for Industrial Policy and the Office of the Under Secretary of Defense for Research and Engineering.

The Office of Local Defense Community Cooperation will hold a pre-proposal webinar on **April 23rd and April 26th at 2 p.m. EDT (11 a.m. PDT)**, to review the goals and objectives of the Federal Funding Opportunity and answer questions from interested respondents.

- To participate in the April 23rd webinar, click [here](#).
- To participate in the April 26th webinar, click [here](#).

Awards: Department of Defense announced the award of six (6) grants totaling \$25,000,000.

Letter of Intent: Please see below.

Proposal Deadline: Complete proposals must be submitted through Grants.gov by **5 p.m. PDT on June 15, 2021**.

Contact Information: Michael Gilroy, michael.p.gilroy3.civ@mail.mil

Grant Program: 2021 ERDC Broad Agency Announcement

Agency: Department of Defense US Army ERDC W912HZ-21-BAA-01

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332617>

Brief Description: The U.S. Army Engineer Research and Development Center (ERDC) includes the Coastal and Hydraulics Lab (CHL), the Geotechnical and Structures Lab (GSL), the Reachback Operations Center (UROC), the Environmental Lab (EL) and the Information Technology Lab (ITL) in Vicksburg, Mississippi, the Cold Regions Research and Engineering Lab (CRREL) in Hanover, New Hampshire, the Construction Engineering Research Lab (CERL) in Champaign, Illinois, and the Geospatial Research Laboratory (GRL) in Alexandria, Virginia. The ERDC is responsible for conducting research in the broad fields of hydraulics, dredging, coastal engineering, instrumentation, oceanography, remote sensing, geotechnical engineering, earthquake engineering, soil effects, vehicle mobility, self-contained munitions, military engineering, geophysics, pavements, protective structures, aquatic plants, water quality, dredged material, treatment of hazardous waste, wetlands, physical/mechanical/ chemical properties of snow and other frozen precipitation, infrastructure and environmental issues for installations, computer science, telecommunications management, energy, facilities maintenance, materials and

structures, engineering processes, environmental processes, land and heritage conservation, and ecological processes. This research is conducted by Government personnel and by contract with educational institutions, non-profit organizations and private industries.

The BAA shall only be used when meaningful proposals with varying technical/scientific approaches can be reasonably anticipated. “Basic Research” is defined as research directed toward increasing knowledge in science with the primary aim being a fuller knowledge or understanding of the subject under study, rather than any practical application of that knowledge. “Applied Research” is the effort that normally follows basic research, but may not be severable from the related basic research; attempts to determine and exploit the potential of scientific discoveries or improvements in technology, materials, processes, methods, devices, or techniques; and attempts to advance the state-of-the-art.

Awards: Multiple awards. DARPA is limiting funding for TA2 awards to \$1,450,000 for the entire 18 months of Phase 1 and \$1,500,000 for the entire 18 months of Phase 2. Funding guidance is not provided for TA1.

Letter of Intent: A pre-proposal is required. Please see the BAA for details.

Proposal Deadline: The closing date for the BAA is Feb 28, 2022.

Contact Information: For contractual questions concerning proposals to CHL, EL, GRL, GSL, ITL, and UROC contact the following: ERDC-BAA@usace.army.mil and Reginald J. Bryant at 601-634-7166 or Reginald.J.Bryant@usace.army.mil or Anitra Wilson at Anitra.D.Wilson@usace.army.mil. For contractual questions concerning proposals to CERL contact: Andrea Thomas at 217-373-6746 or Andrea.J.Thomas@usace.army.mil. For contractual questions concerning proposals to CRREL contact: Melodie Fisher at 601-634-4687 or CRREL-BAA@usace.army.mil.

Grant Program: Quantum Benchmarking

Agency: Department of Defense DARPA - Defense Sciences Office HR001121S0026

Website: <https://beta.sam.gov/opp/b421419cb4d0485baf0c28ee62a9e7b0/view>

Brief Description: The Defense Sciences Office (DSO) at the Defense Advanced Research Projects Agency (DARPA) is soliciting innovative research proposals in the area of quantum benchmarking. Proposed research should quantify the long-term utility of quantum computers. In particular, proposed research should center around either (1) the creation of application-specific, hardware-agnostic benchmarks for quantum computer utility or (2) hardware resource estimation for quantum computers. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

Awards: Multiple awards. DARPA is limiting funding for TA2 awards to \$1,450,000 for the entire 18 months of Phase 1 and \$1,500,000 for the entire 18 months of Phase 2. Funding guidance is not provided for TA1.

Letter of Intent: Please see below.

Proposal Deadline: Proposers Day: April 20, 2021. See Section VIII.A. o Abstract Due Date: May 11, 2021, 4:00 p.m. o FAQ Submission Deadline: June 8, 2021, 4:00 p.m. See Section VIII.B. o Full Proposal Due Date: June 22, 2021, 4:00 p.m.

Contact Information: Joseph Altepeter, Program Manager, DARPA/DSO o
BAA Email: QuantumBenchmarking@darpa.mil

Grant Program: Peer Reviewed Orthopaedic Research Program: Clinical Translational Research Award

Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-21-PRORP-CTRA

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332532>

Brief Description: The PRORP CTRA is intended to support high-impact and/or new/emerging clinical research that may or may not be ready for a full-scale randomized controlled clinical trial. Projects should demonstrate potential to impact the standard of care, both immediate and long-term, as well as contribute to evidence-based guidelines for the evaluation and care of military, Veteran, and all patients with orthopaedic injuries. • One goal of the FY21 PRORP CTRA is to translate current and emerging techniques and interventions into the clinical space to better serve military patients. The health, functional abilities, and quality of life of individuals who have sustained an orthopaedic injury should be considered. • Another goal is to identify the most effective diagnosis, treatment, rehabilitation, and prevention options available to support critical decision-making for patients, clinicians, other caregivers, and policymakers. **Awards:** The anticipated total costs budgeted for the entire period of performance for an FY21 PRORP CTRA will not exceed \$1.5M. The CDMRP expects to allot approximately \$7.5M to fund approximately five Clinical Translational Research Award applications.

Letter of Intent: Please see below.

Proposal Deadline: Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), May 27, 2021 • Invitation to Submit an Application: July 2, 2021 • Application Submission Deadline: 11:59 p.m. ET, September 10, 2021

Contact Information: CDMRP Help Desk Phone: 301-682-5507 Email: help@eBRAP.org

Grant Program: DoD Spinal Cord Injury, Investigator- Initiated Research Award

Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-21-SCIRP-IIRA

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332299>

Brief Description: The vision of the SCIRP is to advance the treatment and management of SCI and ameliorate its consequences relevant to injured Service Members. The FY21 SCIRP challenges the scientific community to design research that will advance the development or translation of healthcare solutions for people living with SCI. Innovative research that fosters new directions or addresses neglected issues in the field of traumatic SCI is also supported, although studies focused exclusively on target identification are discouraged. The SCIRP encourages impactful research across the continuum of care from time-of-injury throughout life that is well reasoned and scientifically supported.

Awards: The anticipated direct costs budgeted for the entire period of performance for an FY21 SCIRP IIRA award will not exceed \$500,000.

Letter of Intent: Please see below.

Proposal Deadline: Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), May 24, 2021 • Invitation to Submit an Application: July 2, 2021 • Application Submission Deadline: 11:59 p.m. ET, September 3, 2021

Contact Information: Office of Naval Research Dr. Joan S. Cleveland Email: joan.cleveland@navy.mil; Army Research Office DR. Larry Russel Jr. Email: usarmy.rtp.ccdc-arl.mbx.aro-muri@mail.mil; Air Force Office of Scientific Research Ms. Katie Wisecarver Email: MURI@us.af.mil

Grant Program: 2022 Department of Defense Multidisciplinary Research Program of the University Research Initiative (MURI)

Agency: Department of Defense Dept of the Army -- Materiel Command W911NF-21-S-0008

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332299>

Other Related MURI Opportunities:

MURI ONR Announcement # N00014-21-S-F003

MURI AFOSR Announcement # FOA-AFRL-AFOSR-2021-0003

Brief Description: The MURI program supports basic research in science and engineering at U.S. institutions of higher education (hereafter referred to as "universities") that is of potential interest to DoD. The program is focused on multidisciplinary research efforts where more than one traditional discipline interacts to provide rapid advances in scientific areas of interest to the DoD. As defined in the DoD Financial Management Regulation: Basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to longterm national security needs. DoD's basic research program invests broadly in many fields to ensure that it has early cognizance of new scientific knowledge.

Awards: The total funding available: \$190 million Typical funding per grant: \$1.25M to \$1.5M range.

Letter of Intent: Please see below.

Proposal Deadline: White Paper Inquiries and Questions: 24 May 2021 (Monday)

White Papers must be received no later than: 7 June 2021 (Monday) at 11:59 PM Eastern Time

Application Inquiries and Questions: 13 September 2021 (Monday)

Applications must be received no later than: 27 September (Monday) at 11:59 PM Eastern Time

Contact Information: Office of Naval Research Dr. Joan S. Cleveland Email:

joan.cleveland@navy.mil; Army Research Office Dr. Larry Russel Jr. Email: usarmy.rtp.cdcd-arl.mbx.aro-muri@mail.mil; Air Force Office of Scientific Research Ms. Katie Wisecarver Email: MURI@us.af.mil

[Back to Contents](#)

[Department of Transportation](#)

Grant Program: Dwight David Eisenhower Transportation Fellowship Program (DDETFP) Graduate Fellowship

Agency: Department of Transportation 693JJ318NF5227-2021

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=331800>

Brief Description: The goals of these Grants are to provide DDETFP Graduate Fellowships to 1) attract the Nation's brightest minds to the field of transportation, 2) enhance the careers of transportation professionals by encouraging them to seek advanced degrees, and 3) bring and retain top talent in the transportation industry of the U.S.

Individual students apply for the DDETFP Graduate Fellowship. The FHWA makes awards to the Institution of Higher Education (IHE) ("Recipient") on behalf of the student ("Student Designee"). The IHE must be accredited by a federally-recognized accrediting agency and must be located within the United States or its Territories. If a student is selected to receive a fellowship, the student, their faculty advisor, and the IHE will be responsible for completing and submitting all required paperwork to execute the Agreement. Students must be prepared to submit a copy of their application package and this Notice of Funding Opportunity (NOFO) to their IHE. The Recipient will be responsible for allocating funds to the Student Designee as outlined in the Budget of the Agreement. The IHE will also be responsible for submitting all required Federal financial reports to FHWA.

Award: The FHWA expects approximately \$1 million to be made available for the DDETFP Graduate Fellowship program.

Letter of Intent: Not Required

Proposal Deadline: Apr 30, 2021 Application deadline is 4/30/2021 at 5:00pm Eastern Time.

Contact Information: Ewa Flom, ewa.flom@dot.gov, 202-924-1125

[Back to Contents](#)

Department of Agriculture:

Grant Program: Soil Science Collaborative Research Proposals

Agency: Department of Agriculture USDA-NRCS-NHQ-SOILS-21-NOFO0001107

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332881>

Brief Description: The Natural Resources Conservation Service (NRCS), an agency under the United States Department of Agriculture (USDA), is announcing the potential availability of funding for agreements for the purposes of:

- Promoting research collaboration between the NRCS Soil and Plant Science Division (SPSD) and university cooperators on significant national issues;
- Providing technology transfer and training for NRCS staff;
- Assisting in training of students in soil science and related fields.

Proposals must be for projects based in the United States and its territories and possessions and focus on the priorities described in Section A of this notice. Research proposals are sought. NRCS anticipates that the amount available for support of this program in FY 2021 will be up to \$1,000,000.00. Eligibility is limited to institutions of higher education in the Cooperative Ecosystem Studies Unit (CESU) network (<http://www.cesu.psu.edu/>). Proposals are requested for competitive consideration of awards for projects 2-3 years in duration.

Awards: Up to \$250,000; Anticipated Available Funding: \$1,000,000.

Proposal Deadline: June 25, 2021

Contact Information: Aileen Anderson Grants Management Specialist Phone 3152215884

[For questions related to application content.](#)

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](#)

[Back to Contents](#)

[Department of Labor](#)

Grant Program: State Apprenticeship Expansion, Equity and Innovation (SAEEI) Grant Program
Agency: Department of Labor FOA-ETA-21-07

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=331689>

Brief Description: The SAEEI Funding Opportunity Announcement FOA will provide up to \$87.5 million in grant awards to support the expansion and diversification of Registered Apprenticeship Programs (RAPs), as described in 29 C.F.R. 29. Grant funds will be awarded to Governor-led, state initiatives that are expanding, diversifying and transforming registered apprenticeship. Funding will provide states with the flexibility to meet specific industry needs and demands. Collectively, these efforts will aim to achieve the following goals:

- 1) System expansion to support the development, modernization, and diversification of RAPs;
- 2) Equity in apprenticeship by increasing the number of apprentices enrolled in RAPs, including underrepresented populations; and
- 3) Partnership and alignment to support workforce system integration;
- 4) Innovation in program development and recruitment strategies.

Allowable activities under this grant include activities related to establishing or expanding existing RAPs for adults and/or youth, pre-apprenticeship leading to a RAP, and wrap-around/supportive services.

Awards: FOA will provide up to \$87.5 million in grant awards.

Proposal Deadline: This advance notice is to encourage potential applicants to begin forming partnerships and other early preparations to improve readiness for when the Funding Opportunity Announcement (FOA) is published. This is not a grant solicitation, and is for informational purposes only. Eligibility, scoring criteria, and other requirements for application will be outlined in full in the upcoming FOA in the spring of 2021.

Contact Information: Matthew Carls Grants Management Specialist, Carls.Matthew.L@dol.gov

[Back to Contents](#)

[Department of Commerce/EDA](#)

Grant Program: EDA University Center Competition - CRO

Agency: U.S. Department of Commerce EDA-CHI-TA-CRO-2021-2006893

Website: <https://www.eda.gov/programs/university-centers/>

Brief Description: EDA recognizes that institutions of higher education are critical players in the development of vibrant economic ecosystems. Universities are sources of significant economic development assets—such as faculty, staff, students, research and proof of concept centers, laboratories, and high-speed broadband networks—that can support regional economic growth.

The purpose of EDA's University Center program is to enable institutions of higher education and consortia of institutions of higher education to establish and operate University Centers (UCs) specifically focused on leveraging university assets to build regional economic ecosystems that support innovation and high-growth entrepreneurship, resiliency and inclusiveness. By responding to the economic development needs of their regions, University Center programs are demand-driven by nature. Historically, UCs have been leaders in promoting and facilitating economic development in their regions. They have been among the first to recognize emerging technical assistance needs. As early as FY 1980, EDA-funded UCs responded to the needs of small- and medium-sized manufacturers and processors for technology transfer and commercialization assistance. More recently, some UCs have been providing

resources and guidance on how to create a digitally inclusive economy while others are working with stakeholders in their regions to address economic impacts from the closure of major plants.

Awards: Project funding up to \$200,000. Anticipated available funding: \$1,400,000

Letter of Intent: Contact the program director.

Proposal Deadline: June 4, 2021

Contact Information: www.eda.gov/contact

Grant Program: NOAA Science Collaboration Program

Agency: U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA) NOAA-OAR-CPO-2021-2006797

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332046>

Brief Description: The NOAA Science Collaboration Program (NSCP) supports research, programs, projects and other activities related to NOAA's mission, primarily through collaborations among scientists and professionals in areas of mutual interest across the full spectrum of NOAA sciences. This includes the support of undergraduate, graduate, and postdoctoral researchers and scientists with expertise in NOAA-related sciences. It is expected that some of the scientists will collaborate onsite at NOAA facilities and laboratories. Through this funding opportunity, NOAA is also interested in supporting complementary Earth systems research and modeling efforts, social science and interdisciplinary research efforts which can serve as a catalyst for collaborations between NOAA professionals and scientists supported through this program.

Awards: The total NOAA funding amount available for the NSCP is anticipated to be approximately \$10,000,000 to \$15,000,000 per year or a total of \$50,000,000 to \$75,000,000 for the five-year period.

Letter of Intent: Contact the program director.

Proposal Deadline: May 10, 2021

Contact Information: Ms. Kendra R. Hammond 301-734-1223 [Work](#)

Grant Program: Measurement Science and Engineering (MSE) Research Grant Programs

Agency: U.S. Department of Commerce NIST 2021-NIST-MSE-01

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=331121>

Brief Description: NIST is soliciting applications for financial assistance for Fiscal Year 2021 (FY21) within the following NIST grant programs:

- (1) the Associate Director for Innovation and Industry Services (ADIIS);
- (2) the Associate Director for Laboratory Programs (ADLP);
- (3) the Communications Technology Laboratory (CTL);
- (4) the Engineering Laboratory (EL);
- (5) Fire Research (FR);
- (6) the Information Technology Laboratory (ITL);
- (7) the International and Academic Affairs Office (IAAO);
- (8) the Material Measurement Laboratory (MML);
- (9) the NIST Center for Neutron Research (NCNR);
- (10) the Physical Measurement Laboratory (PML);
- (11) the Special Programs Office (SPO); and
- (12) the Standards Coordination Office (SCO).

Awards: Various; Grants or cooperative agreements

Letter of Intent: Contact the program director.

Proposal Deadline: Applications will be accepted and considered on a rolling basis as they are received.

Contact Information: Misty L Roosa Management Analyst Phone 301-975-3007
[Agency Contact](#)

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

[Back to Contents](#)

[EPA](#)

Grant Program: Early Career: Measurement and Monitoring Methods for Air Toxics and Contaminants of Emerging Concern in the Atmosphere

Agency: Environmental Protection Agency EPA-G2021-STAR-C2

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332406>

Brief Description: The U.S. Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is seeking applications proposing research to advance air measurement and monitoring methods for air toxics and contaminants of emerging concern in the atmosphere. Specifically, this RFA seeks research that will provide: 1. advancements in measurement techniques for real time, continuous measurements of concentrations with minimum detection limits below background concentrations or health risk-based thresholds; and 2. advancements in stationary or mobile near source measurement methods for quantifying emission rates of fugitive emissions.

Award: Grant or cooperative agreement up to \$800,000. Anticipated Funding Amount: Approximately \$2.4 million total for all awards

Submission Deadline: Solicitation Closing Date: June 2, 2021, 11:59:59 pm Eastern Time

Contact: Technical Contact: Serena Chung; phone: 202-564-6069; email: chung.serena@epa.gov

[Back to Contents](#)

[Department of Energy](#)

Grant Program: SOLAR ENERGY TECHNOLOGIES OFFICE FISCAL YEAR 2021 FUNDING PROGRAM Photovoltaics and Concentrating Solar Power

Agency: Department of Energy DE-FOA-0002378

Website: <https://eere-exchange.energy.gov/Default.aspx#FoaIdd3cba83d-0202-4cf4-8289-f3c365ec5bbf>

Brief Description: This funding opportunity announcement (FOA) is being issued by the U.S. Department of Energy’s (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO) to invest in innovative research and development (R&D) that will drive down costs and develop next-generation technologies ready for commercialization. The office supports solar energy research, development, demonstration, and technical assistance in five areas—photovoltaics (PV), concentrating solar-thermal power (CSP), systems integration, manufacturing and competitiveness, and soft costs—to improve the affordability, reliability, and domestic benefit of solar technologies on the electric grid.

Building a clean and equitable energy economy and addressing the climate crisis is a top priority of the Biden Administration. This FOA will advance the Biden Administration’s goals to achieve carbon pollution-free electricity by 2035 and to “deliver an equitable, clean energy future, and put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050¹” to the benefit of all Americans. The Department of Energy is committed to pushing the frontiers of science and engineering, catalyzing clean energy jobs through research, development, demonstration, and deployment, and ensuring environmental justice and inclusion of underserved communities.

Awards: EERE expects to make a total of approximately \$39,500,000 of federal funding available for new awards under this FOA, subject to the availability of appropriated funds. EERE anticipates making approximately 31 to 54 awards under this FOA. EERE may issue one, multiple, or no awards. Individual awards may vary between \$300,000 and \$5,000,000.

Letter of Intent: April 26, 2021

Submission Deadline: June 24, 2021

Contact: Questions regarding the content of this FOA must be submitted to: PV.CSP.FOA@ee.doe.gov.

Grant Program: Data Reduction for Science

Agency: Department of Energy Office of Science DE-FOA-0002501

Website: <https://science.osti.gov/grants/FOAs/Open>

Brief Description: The DOE SC program in Advanced Scientific Computing Research (ASCR) hereby announces its interest in research applications to explore potentially high-impact approaches in the development and use of data reduction techniques and algorithms to facilitate more efficient analysis and use of massive data sets produced by observations, experiments and simulation.

Scientific observations, experiments, and simulations are producing data at a rate beyond our capacity to store, analyze, stream, and archive. This data almost always contains redundancies and trivialities that hide the important information of interest to scientists. Of necessity, many research groups have already begun reducing the size of their data sets via techniques such as compression, reduced order models, experiment-specific triggers, filtering, and feature extraction. These efforts should be expanded to include mathematical rigor to ensure that scientifically-relevant constraints on quantities of interest are satisfied,

¹ Executive Order 14008, “Tackling the Climate Crisis at Home and Abroad,” January 27, 2021.

to be integrated into scientific workflows, and to be implemented in a manner that inspires trust that the desired information is preserved.

Awards: Award Ceiling: \$800,000; Estimated Total Program Funding: \$10,000,000

Letter of Intent: Submission Deadline for Pre-Applications: May 6, 2021 at 5:00 PM ET

Submission Deadline: June 4, 2021 at 11:59 PM ET

Contact: William Spotz Program Manager Phone 301-903-9938

[Program Manager email](#)

Grant Program: University-Based Energy Industry Research and Development of Scalable Cyber-Physical Solutions

Agency: Department of Energy Office of Science DE-FOA-0002477

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=332620>

Brief Description: This FOA seeks to improve the cyber and cyber-physical security posture of the electric sector through the integration of the DOE Cybersecurity Roadmap Vision statement of ensuring that resilient energy delivery systems are designed, installed, operated, and maintained to survive a cyber incident while sustaining critical functions.

Awards: Award Ceiling: \$2,000,000; Estimated Total Program Funding: \$8,000,000

Submission Deadline: June 14, 2021

Contact: Shane R. Buchanan 412-386-4716 [Click to email contact](#)

[Back to Contents](#)

[NASA](#)

Grant Program: ROSES 2021: Instrument Incubator Program

Agency: NASA NNH21ZDA001N-IIP

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BDAAE2F81-ED80-CFF7-F74D-00C054480E87%7D&path=&method=init>

Brief Description: The Instrument Incubator Program (IIP) supports the development of innovative technologies for Earth observing instruments, sensors, and systems in support of Earth science. The technologies and measurement concepts developed under the IIP may extend through field demonstrations, with a longer-term aim for infusion into future Earth Science Division research, applications, and flight programs. Emerging technologies and new instrument architectures and platforms show great promise for measuring natural Earth phenomena and physical processes that have not been well characterized by conventional satellite instruments alone. In particular, transient and dynamical phenomena have been difficult to study using traditional low Earth orbit (LEO) satellite instruments due to insufficient temporal sampling of such phenomena. Inexpensive, high quality intelligent sensors and platforms operated in higher orbits (MEO, GEO, etc.), or in a LEO constellation and/or in a coordinated fashion, coupled with new pointing, real time data processing, and commanding capabilities, could now give scientists the ability to conduct observations focused on dynamic processes and/or events of interest. These targeted events require interconnectivity and the on-platform computational capacity to coordinate among platforms, instruments, and models of the phenomenon or process. Emerging new instrument technologies potentially coupled with new platform capabilities and rapidly evolving information technologies could become the early backbone of new observing systems that can react to changing environmental conditions.

Awards: It is anticipated that a total of 12-14 proposals will be selected and the value of each will be approximately \$1.5M per year. The total proposed period of performance must not exceed 36 months.

Notice of Intent: Notices of Intent to propose are requested by May 21, 2021.

Proposal Deadline: July 20, 2021

Contact: Parminder Ghuman Science Mission Directorate Earth Science Technology Office Telephone: (301) 974-9246 Email: p.ghuman@nasa.gov

Grant Program: ROSES 2021: Heliophysics Mission Concept Studies

Agency: NASA NNH21ZDA001N-HMCS

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B39554337-ED9A-7C4F-EC92-DCB9DC510DDE%7D&path=&method=init>

Brief Description: The Heliophysics Mission Concept Studies (HMCS) program will fund six-month-long mission concept studies that are part of community preparation for the next Solar and Space Physics Decadal Survey. These studies will be conducted by the proposal team, using mission design capabilities included in the proposal, and will result in a final mission concept report delivered to NASA. Additionally, NASA will support awardees submitting and briefing the mission concept to the Decadal Survey Committee ("the Committee" see Section 2.2). Should NASA choose to develop a mission that flows from any selected mission concept study, the responsibility for that mission will be assigned by NASA; there is no expectation that the mission concept study team or participating organizations will necessarily participate in the eventual mission development.

Awards: It is expected that there will be approximately \$2.5 M available to support new mission concept studies selected through this program element.

Notice of Intent: Notices of intent are due April 23, 2021

Proposal Deadline: May 28, 2021

Contact: Jared Leisner Heliophysics Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: (202) 358-2016 Email: jared.s.leisner@nasa.gov

Grant Program: ROSES 2021: Living With a Star Science

Agency: NASA NNH21ZDA001N-LWS

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BDD29C108-980F-6F1A-AEC7-CE7375E35007%7D&path=&method=init>

Brief Description: The Living With a Star (LWS) Program emphasizes the science necessary to understand those aspects of the Sun and Earth's space environment that affect life and society. The ultimate goal of the LWS Program is to provide a scientific understanding of the system that leads to predictive capability of the space environment conditions at Earth, other planetary systems, and in the interplanetary medium. Every year the LWS Program solicits Focused Science Topics (FSTs) that address some part of this goal.

This goal poses two great challenges for the LWS program. First, the program seeks to address large-scale problems that cross discipline and technique boundaries (e.g., data analysis, theory, modeling, etc.); and second, the program will identify how this new understanding has a direct impact on life and society. Over time, the Targeted Investigations have provided advances in scientific understanding that address these challenges.

Awards: TBD

Notice of Intent: Please see below

Proposal Deadline: Step-1 proposals are due September 8, 2021, and Step-2 proposals are due November 18, 2021.

Contact: Simon Plunkett Telephone: (202) 358-2034 Email: simon.p.plunkett@nasa.gov
Jeff Morrill Telephone: (202) 358-3744 Email: jeff.s.morrill@nasa.gov

Grant Program: New (Early Career) Investigator Program in Earth Science: not solicited in ROSES-21

Agency: NASA NNH21ZDA001N-NIP

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BC31820ED-A589-B008-7448-1014FCA16C49%7D&path=&method=init>

Brief Description: The New (Early Career) Investigator Program in Earth science is designed to support outstanding scientific research and career development of scientists and engineers at the early stage of their professional careers. The program welcomes innovative research initiatives and seeks to cultivate diverse scientific leadership in Earth system science. The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research. Proposals with objectives connected to needs identified in most recent Decadal Survey Thriving on our Changing Planet: A Decadal Strategy for Earth Observation from Space are welcomed. The program supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (See the Science Plan at <http://science.nasa.gov/about-us/science-strategy/>). In research and analysis, the focus areas are: • Carbon Cycle and Ecosystems, • Climate Variability and Change, • Water and Energy Cycle, • Atmospheric Composition, • Weather, and • Earth Surface and Interior

Awards: TBD

Notice of Intent: Please see below

Proposal Deadline: This program is NOT soliciting proposals this year. The 'close date' of 02/14/2022 advertised above is not a proposal due date; NSPIRES requires that a specific close date be given. Please see the program element document above for details.

Contact: Allison Leidner Earth Science Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: 202-358-0855 Email: Allison.K.Leidner@nasa.gov

Grant Program: Earth Science Applications: Health and Air Quality

Agency: NASA NNH21ZDA001N-HAQ

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B78D66990-C241-F2F9-5A15-BC02AD87C40D%7D&path=&method=init>

Brief Description: The ESD Applied Sciences Program promotes efforts to discover and demonstrate innovative and practical uses of Earth observations. The Program funds applied science research and applications projects to enable near-term uses of Earth observations, formulate new applications, integrate Earth observations and related products in practitioners' decision-making, and transition the applications. The projects are carried out in partnership with public- and private-sector organizations to achieve sustained use and sustained benefits from the Earth observations. For more information visit the Applied Sciences Program website at <http://AppliedSciences.NASA.gov/>. The Program supports projects that develop and demonstrate improvements to decision-making from the use of an array of Earth observations and related products. The Program considers that Earth observations broadly include a range of products and capabilities, including Earth-observing satellite measurements (NASA in-orbit and planned satellites, as well as foreign, commercial, and other U.S. Government satellites), outputs and predictive capabilities from Earth science models, algorithms, visualizations, knowledge about the Earth system, and other geospatial products. Hereinafter, this set is referred to collectively as "Earth observations".

Awards: \$3M total per year; Expected Range of Award per project: \$250-350K per year

Notice of Intent: Please see below

Proposal Deadline: June 18, 2021

Contact: John Haynes Applied Sciences Program Earth Science Division Science Mission Directorate
NASA Headquarters Washington, DC 20546-0001 Telephone: (202) 358-4665 Email:

jhaynes@nasa.gov

[Back to Contents](#)

National Endowment of Humanities

Grant Program: American Rescue Plan: Humanities Grantmaking

Agency: National Endowment for the Humanities 20210513-ARPG

Website: <https://www.neh.gov/program/american-rescue-plan-humanities-grantmaking>

Brief Description: The American Rescue Plan Act of 2021 recognizes that the humanities sector is an essential component of economic and civic life in the United States. The Act appropriated supplemental funding to NEH to provide financial support to organizations and individuals working in the humanities that have been adversely affected by the coronavirus pandemic and require support to restore and sustain their core functions and activities. In keeping with Congress’s intent in enacting this legislation, proposals under this notice should help humanities organizations and professionals to “prevent, prepare for, respond to, and recover from the coronavirus.”

The American Rescue Plan: Humanities Grantmaking program invites applications from organizations experienced at providing grants at a national or regional (i.e., multi-state) level to administer competitive grantmaking programs for humanities organizations *or* individuals who work in the humanities. Applicants may propose a new grantmaking program or to expand or adapt an existing program. The program may be for *either* organizations *or* for individuals, but not for both. The proposed grantmaking program may include multiple tracks for applicants (e.g., for junior scholars and senior scholars; for museums and archives). NEH especially encourages applications for grantmaking programs that promote diversity, equity, and inclusion in the humanities.

Program will host a [pre-application webinar](#) April 20, 2021, 2:00 p.m. Eastern Time.

Award: Maximum award amount : Up to \$2,000,000 for grantmaking programs for individuals; up to \$5,000,000 for grantmaking programs for organizations.

Proposal Deadline: Application due May 13, 2021

Contact: Contact the Agency-Wide Programs Team ARPgrantmaking@neh.gov

Grant Program: Digital Projects for the Public

Agency: National Endowment for the Humanities 20210609-MD-MN-MT

Website: <https://www.neh.gov/grants/public/digital-projects-the-public>

Brief Description: The Digital Projects for the Public program supports projects that interpret and analyze humanities content in primarily digital platforms and formats, such as websites, mobile applications and tours, interactive touch screens and kiosks, games, and virtual environments. All projects should demonstrate the potential to attract a broad, general, nonspecialist audience, either online or in person at venues such as museums, libraries, or other cultural institutions. Applicants may also choose to identify particular communities and groups, including students, to whom a project may have particular appeal. A recorded webinar for prospective applicants will be posted on this page by April 16, 2021.

Award: Maximum award amount \$30,000 (Discovery grants); \$100,000 (Prototyping grants); \$400,000 (Production grants)

Proposal Deadline: Optional Draft due May 5, 2021; Application due June 9, 2021

Contact: Contact the Division of Public Programs Team; 202-606-8269; publicpgms@neh.gov

Grant Program: Humanities Initiatives

Agency: National Endowment for the Humanities 20210520-AA-AB-AC-AD-AE

Website: <https://www.neh.gov/grants/preservation/research-and-development>

Brief Description: The National Endowment for the Humanities (NEH) Division of Education Programs is accepting applications for the five Humanities Initiatives programs: Humanities Initiatives at Colleges and Universities, Humanities Initiatives at Hispanic-Serving Institutions, Humanities Initiatives at Historically Black Colleges and Universities, Humanities Initiatives at Tribal Colleges and Universities, and Humanities Initiatives at Community Colleges. The purpose of these programs is to strengthen the teaching and study of the humanities at institutions of higher education by developing new humanities programs, resources (including those in digital format), or courses, or by enhancing existing ones.

Award: Maximum award amount: \$150,000 per award; Available funding: \$3,000,000

Proposal Deadline: May 21, 2021

Contact: Division of Education Programs National Endowment for the Humanities 400 Seventh Street, SW Washington, DC 20506 202-606-2324 hi@neh.gov

Grant Program: Research and Development

Agency: National Endowment for the Humanities 20210518-PR

Website: <https://www.neh.gov/grants/preservation/research-and-development>

Brief Description: The Research and Development program supports projects that address major challenges in preserving or providing access to humanities collections and resources. These challenges include the need to find better ways to preserve materials of critical importance to the nation's cultural heritage—from fragile artifacts and manuscripts to analog recordings and digital assets subject to technological obsolescence—and to develop advanced modes of organizing, searching, discovering, and using such materials.

This program supports projects at all stages of development, from early planning and stand-alone studies, to advanced implementation. Research and Development projects contribute to the evolving and expanding body of knowledge for heritage practitioners, and for that reason, outcomes may take many forms. Projects may produce any combination of laboratory datasets, guidelines for standards, open access software tools, workflow and equipment specifications, widely used metadata schema, or other products.

Research and Development supports work on the entire range of humanities collection types including, but not limited to, moving image and sound recordings, archaeological artifacts, born digital and time-based media, rare books and manuscripts, archival records, material culture, and art. Applicants must demonstrate how advances in preservation and access through a Research and Development project would benefit the cultural heritage community by supporting humanities research, teaching, or public programming.

Research and Development projects are encouraged to address one or more of the following areas of special interest:

- **Preserving our audiovisual and digital heritage**
- **Conserving our material past**
- **Protecting our cultural heritage**

- **Serving under-represented communities**

Award: Maximum award amount Tier I provides awards up to \$75,000; Tier II provides awards up to \$350,000

Proposal Deadline: Application due May 18, 2021

Contact: Division of Preservation and Access Team 202-606-8570; preservation@neh.gov

[Back to Contents](#)

Private Foundations

New Jersey Commission on Spinal Cord Research

Grant Program: Exploratory Research Grants and Postdoctoral and Graduate Student Fellowship Research Grants

Agency: New Jersey Commission on Spinal Cord Research

Website: <https://nj.gov/health/spinalcord/grant-information/>

Brief Description: The Commission's mission is to ensure that the people of New Jersey receive the utmost attention and benefit in our nation's fight against spinal cord injury and disease through its promotion of research into the treatment and cure.

The NJCSCR is committed to accelerating research to develop effective interventions and cures for paralysis and other consequences of spinal cord injury and disease. Its primary objectives are: • To advance the field of spinal cord repair and regeneration and the New Jersey research community by encouraging established scientists to apply their expertise to the spinal cord. • To facilitate the application of innovative ideas from other areas of science to the challenges of spinal cord injury repair. • To foster collaborative, interdisciplinary approaches to spinal cord research. • To nurture the next generation of spinal cord researchers through support of young scientists and postdoctoral fellows. • To prevent or treat secondary biological conditions resulting from spinal cord injury. • To promote dissemination of the research findings generated by those scientists supported by the NJCSCR.

Awards: Various

Letter of Intent: Not required

Proposal Deadline: Grant Applications must be submitted in SAGE by 3:00PM - May 3, 2021.

Contact: Research Program Guidelines: <https://nj.gov/health/spinalcord/documents/researchpgr.pdf>

American Diabetes Association (ADA)

Grant Program: The American Diabetes Association Health Disparities and Diabetes Research Award

Agency: American Diabetes Association (ADA)

Website: <https://professional.diabetes.org/content/targeted-rfas>

Brief Description: The American Diabetes Association (ADA) is requesting applications for research ([see RFA](#)) focused on the impact of diabetes on health disparities and the impact of health disparities on diabetes and its complications. For this funding opportunity, attention must focus on, and hypotheses should reflect, the impact of race/ethnicity, socioeconomic status, health care access, and/or other direct factors that underlie diabetes health disparities, and applications should describe how results of the proposed research will transform assessment and treatment of underserved groups and their potential to significantly improve outcomes in diabetes or its complications. The ADA encourages formative research,

intervention development, and pilot-testing of interventions. For the purposes of this funding initiative, interventions may include behavioral, social, or structural approaches, as well as combination biomedical and behavioral approaches that prevent and/or improve clinical outcomes for people living with diabetes.

Awards: Various

Letter of Intent: Please see below

Proposal Deadline: Postdoctoral Fellowship: May 3, 2021

Innovative Clinical or Translational Science: LOI Due: June 7, 2021; Full Submission: August 30, 2021

Junior Faculty: LOI Due: June 7, 2021; Full Submission: August 30, 2021

All applications must be submitted through our online grant portal.

Contact: Questions about this request for applications should be addressed to: grantquestions@diabetes.org.

[Back to Contents](#)

[Streamlyne Question of the Week](#)

Question: How can I add another investigator or my research ambassador to my proposal in order to help on budget preparation and edit proposal details?

Answer: Select the “Permissions” link from the left hand side of the main proposal screen in any proposal development document. From the Permissions screen you will be able to search for the person you wish to add and grant them a specific level of permission (aggregator, budget creator, viewer). After you select the appropriate person, click “Add” and they will be added to your proposal.

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

[Back to Contents](#)

[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>.

[Back to Contents](#)
