**Special Announcements**

**Israel-US Fund Seeking Proposals for Clean-Energy Joint Research**


The Israel-US binational fund for energy research, BIRD Energy, is calling on tech firms and academic researchers in both countries to submit joint proposals for projects in the field of clean energy technologies. The [call for proposals](https://www.birdf.com/bird-energy-call-proposals) is part of BIRD Energy’s next funding round for joint research. Since 2009, the fund has financed 55 projects to date with a total investment from the US and Israeli governments of a total of $42 million. This funding has been matched by private money for an additional total of $55 million.

**Deadlines:** Executive Summary: June 30, 2021; Final Proposal: August 13, 2021

**Submission Information:** [http://www.birdf.com/upload-system/](http://www.birdf.com/upload-system/)
To be considered, a project proposal should include:

- R&D cooperation between two companies or cooperation between a company and a university/research institution (one from the U.S. and one from Israel)
- Innovation in all areas of renewable energy and energy efficiency, such as solar and wind power, advanced vehicle technologies and alternative fuels, smart grid, storage, water-energy nexus, advanced manufacturing, AI for energy management, etc.
- Innovation in natural gas and other associated technologies
- Significant commercial potential; the project outcome should lead to commercialization

The maximum conditional grant is $1M per project, and no more than 50% of the joint R&D budget.

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:** Resilient & Intelligent NextG Systems (RINGS); 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)

**NIH:** BRAIN Initiative: Development and Validation of Novel Tools to Probe Cell-Specific and Circuit-Specific Processes in the Brain (R01); NIH Director’s Early Independence Awards (DP5); Translational Neural Devices (U44); 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)

**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: Assisting Federal Facilities with Energy Conservation Technologies (AFFECT); 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: Early Stage Innovations (ESI); 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:
American Diabetes Association (ADA): The American Diabetes Association Health Disparities and Diabetes Research Award

Recent Research Grant and Contract Awards

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

PI: Sergei Adamovich (PI)
Department: Center for Rehabilitation Robotics
Grant/Contract Project Title: STTR Phase I: A customized upper extremity telerehabilitation solution with remote therapist interaction and dynamic motor recovery feedback for individuals post stroke
Funding Agency: U.S. Department of Transportation
Duration: 05/01/21-10/31/21

PI: John Federici (PI) and Ian Gatley (Co-PI)
Department: Physics
Grant/Contract Project Title: THz Test Methodologies for Aircraft Coatings
Funding Agency: DOD - SERDP
Duration: 04/21/21-01/31/24

PI: Treena Arinzeh (PI)
Department: Biomedical Engineering
Grant/Contract Project Title: A Metabolic Strategy Utilizing a Zein Scaffold for Bone Repair
Funding Agency: NIH
Duration: 05/01/21-04/30/22

PI: Zeyuan Qiu (PI)
Department: Chemistry and Environmental Sciences
Grant/Contract Project Title: Watershed Plan for - Southern Barnegat Bay- Little Egg Harbor  
Funding Agency: NJ DEP (Department of Environmental Protection)  
Duration: 03/01/21-02/28/22  

PI: Lazar Spasovic (PI), Dejan Besenski (Co-PI), Jo Young Lee (Co-PI), Branislav Dimitrijevic (Co-PI), Steven Chien (Co-PI), and Taha Marhaba (Co-PI)  
Department: Intelligent Transportation Systems Research Center  

Grant/Contract Project Title: ITS Resource Center  
Funding Agency: NJ Department of Transportation  
Duration: 01/01/21-12/31/21  

PI: Eun Jung Lee (PI) and Vivek Kumar (Co-PI)  
Department: Biomedical Engineering  

Grant/Contract Project Title: The Effect of Myocardial Inflammation on Stem Cell Effectiveness as ‘Repair Cell’ Therapy  
Funding Agency: NIH  
Duration: 03/09/21-02/28/22  

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

Federal Grants Management: The federal grant system is vast. In fiscal year 2019, agencies spent $765 billion on grants to states, localities, research institutions, non-profits, and others—that’s more than the Pentagon’s annual budget. In response to the COVID-19 pandemic, grant spending surged to $921 billion last year. Grants expert Jeff Myers, along with several of his colleagues, recently wrote in Government Executive: “A new survey [of federal grant managers] shows that administrative costs have spiked, while funding agencies struggle to measure outcomes … It isn’t surprising that measuring recipient outcomes is challenging. Grant managers are accustomed to measuring and reporting funding flows and uses, timeliness, and compliance. But data about quality, customer satisfaction and mission impact are harder to define.” As Myers noted, most of the attention given to federal grants management has been devoted to the tasks of awarding and distributing funds and, after they have been awarded, to tracking spending. Until fairly recently, surprisingly little attention has been given to tracking program outcomes, or more importantly, in trying to improve those outcomes.

The Office of Management and Budget has been the leader in promoting results-oriented grants. Last year, it led a task force that published a Grants Playbook that calls for “a paradigm shift in grants management from one heavy on compliance to a more balanced approach that includes establishing measurable program and project goals and analyzing data to improve results.” This shift involves changing roles and responsibilities across the grants system.  

Reinventing Roles  
In a new report for the IBM Center, Federal Grants Management: Improving Outcomes, Shelley Metzenbaum argues that to shift the emphasis from administrative matters to improving outcomes requires rethinking the roles and responsibilities of the many players in the federal grant system. Many individuals—in government and elsewhere—are currently involved at various points in the life cycle of a grant program. They may influence both program objectives as well as the rate and magnitude of
progress on those objectives. Their roles and responsibilities tend to be diffuse and, unfortunately, it is currently far easier to identify those working on fiscal, audit, and oversight matters than those working on improving program outcomes.

To drive improvement across the grants management system, Metzenbaum recommends developing three new roles: 1) designating grant program “outcome brokers”; 2) changing the role of traditional grant managers to become problem solvers; and 3) creating networks of grant program recipients who would comprise continuous learning and improvement communities. More information is posted on the on the GovExec website.

**Biden Pitches Expanded Federal Research Investments to Keep U.S. Competitive:** President Joe Biden repeated prior commitments and expanded on his broad agenda that involves investing heavily in America’s research and technology landscape during his first formal address to Congress on Wednesday night. The administration’s recently proposed American Jobs Plan includes the biggest increase in nondefense research and development on record, he noted.

“We will see more technological change in the next 10 years than we saw in the last 50—that’s how rapidly artificial intelligence and so much more is changing. And we’re falling behind in that competition with the rest of the world,” Biden said. “Decades ago, we used to invest 2% of our [gross domestic product in America] on research and development. Today, we spend less than 1%. China and other countries are closing in fast. We have to develop and dominate the products and technologies of the future: advanced batteries, biotechnology, computer chips and clean energy.”

Under that plan, billions of dollars would be put toward basic research, federally focused innovation and increasingly critical technologies. Calling it “a blue-collar blueprint to build America,” Biden said the proposal would produce jobs to grow America’s economy and upgrade its transportation and communications infrastructure. “It creates jobs connecting every American with high-speed internet, including 35% of rural Americans who still don’t have it,” he noted, adding, “this will help our kids and businesses succeed in a 21st-century economy.”

“Our grids are vulnerable to storms, hacks and catastrophic failures—with tragic results as we saw in Texas and elsewhere during winter storms,” Biden said. The U.S. will additionally work with like-minded allies in these efforts. He noted that, "no one nation can deal with all the crises of our time alone—from terrorism to nuclear proliferation to mass migration, cybersecurity, climate change—and as we’re experiencing now, pandemics.” Just as the Pentagon launched the Defense Advanced Research Projects Agency to develop breakthroughs to enhance America’s national security, which “led to the internet and GPS and so much more,” Biden said the National Institutes of Health should create a similar Advanced Research Projects Agency for health. That hub would develop health breakthroughs to prevent and detect diseases like Alzheimer’s, diabetes and cancer. More information is posted on the NextGov website.

**National Science Foundation Funding:** Federal leaders made their cases for increased funding into research and continued focus on technologies like artificial intelligence and quantum computing. Emerging technologies—and partnerships promoting them among agencies and outside players—will be instrumental in ensuring America keeps an innovative edge in years to come, two senior government officials told lawmakers Wednesday.

“For the first time in decades, the United States’ leadership in science and engineering is facing intense global competition. Other nations, especially China, are investing vast resources in basic research and industries of the future, like artificial intelligence,” National Science Foundation Director Dr. Sethuraman Panchanathan said during a hearing held by the House Research and Technology Subcommittee. “Advances in technologies like AI, quantum information science, and even the technologies we cannot yet conceive of, will influence the global balance of power for generations to come.”
During the almost two hour-long virtual discussion on NSF’s modern role in advancing the nation’s scientific enterprise, Panchanathan and National Science Board Chair Dr. Ellen Ochoa shared their perspectives on the need for large increases to the federal science agency’s budget. They also called for a comprehensive approach to research and development investments that could bring science- and technology-centered innovations to market at a more rapid pace. More information is posted on the NextGov website.

**Army 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.

Back to Contents
Webinar and Events

Event: GOLD-EN Office Hours
Sponsor: NSF
When: May 3, 2021, 2.00 PM – 4.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302572&org=NSF
Brief Description: The Directorate for Geosciences recently published a Dear Colleague Letter: Geoscience Opportunities for Leadership in Diversity - Expanding the Network (GOLD-EN). Office hours will be held to discuss projects with the Program Director. Please see the below dates, times, and connection information.
To Join the Webinar: Zoom
Link: https://nsf.zoomgov.com/j/1619619974?pwd=aU9pekFhY0JmRzFRaU5wSDM5NVZCdz09
Meeting ID: 161 961 9974
Passcode: GOLDEN

Event: CISE Broadening Participation in Computing Webinar
Sponsor: NSF
When: May 4, 2021, 2.00 PM – 3.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302618&org=NSF
Brief Description: NSF’s Directorate for Computer and Information Science and Engineering (CISE) is providing information on the Broadening Participation in Computing (BPC) program solicitation NSF 21-571 via a webinar on May 4, 2021 starting at 2:00 pm ET. The BPC Program aims to significantly increase the number of U.S. citizens and permanent residents receiving post-secondary degrees in the computing disciplines, and to encourage participation of other underrepresented groups in the discipline. These groups may include women, persons with disabilities, Blacks and African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders. The BPC program will support three categories of awards:

- **Alliances** are broad coalitions of academic institutions of higher learning, K-12 schools, government, industry, professional societies, and other not-for-profit organizations that design and carry out comprehensive programs addressing underrepresentation in the computing disciplines. Existing Alliances with documented evidence of national impact on broadening participation in computing may apply for an **Alliance Extension** to increase the duration, scope, student groups to be reached, partners, and/or projects.

- **Demonstration Projects (DPs)** will pilot innovative programs that, once fully developed, could be incorporated into the activities of an existing or new Alliance, or otherwise scaled up for widespread impact.

- **Supplements** to existing CISE research awards are intended to engage more members of the computing research community in significant BPC efforts as part of a project’s BPC plan.

The webinar will include a briefing on the BPC program and key solicitation requirements followed by a question-and-answer session. Prior to the webinar, you can submit questions to cise-bpc@nsf.gov.
To Join the Webinar: Register in advance for this webinar, which will take place via Zoom: https://nsf.zoomgov.com/webinar/register/WN_SaP8TX1gQ_u5vnXk0TUXzg

Event: Webinar: Detecting rare disease: Revealing the methods, motivations, and implications
Sponsor: Science, AAAS
When: May 6, 2021, 12.00 PM – 1.00 PM
Brief Description: By their nature, rare diseases are difficult to detect because of their low overall occurrence in most populations. Improving identification and detection of these disorders, particularly early in the life of the patient, can have profound effects on the course of the disease and the quality of life of the patient and their family. This webinar will examine methods for detecting patients with rare diseases, particularly those with underlying genetic causes, explained in plain language. Our expert panel will describe the benefits and limitations of genetic testing, recent advances, and new technologies, including how developments in artificial intelligence might help uncover hidden rare diseases. Only a decade ago it cost a billion dollars to conduct a full genomic analysis; now this can be done for about $1,000. But how useful and actionable are the results? The variety of genetic tests available provide an array of information that can be confusing to the general population and medical practitioners alike. Tune in to learn how and why genetic testing is done, how to interpret the results, and what impact these results can have on families and patients managing a rare disease.

To Join the Webinar: please register at the above URL

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.


Grant Opportunities

National Science Foundation

Grant Program: Resilient & Intelligent NextG Systems (RINGS)
Agency: National Science Foundation NSF 21-581
RFP Website: https://www.nsf.gov/pubs/2021/nsf21581/nsf21581.htm

Brief Description: The RINGS program seeks to accelerate research in areas that will potentially have significant impact on emerging Next Generation (NextG) wireless and mobile communication, networking, sensing, and computing systems, along with global-scale services, with a focus on greatly improving the resiliency of such networked systems among other performance metrics. Modern communication devices, systems, and networks are expected to support a broad range of critical and essential services, incorporating computation, coordination, and intelligent decision making. Resiliency of such systems, which subsumes security, adaptability, and autonomy, will be a key driving factor for future NextG network systems. Resiliency in both design and operations ensures robust network and computing capabilities that exhibit graceful performance- and service-degradation with rapid adaptability under even extreme operating scenarios. The RINGS program seeks innovations to enhance both resiliency as well as performance across the various aspects of NextG communications, networking and computing systems. This program seeks to go beyond the current research portfolio within the individual participating directorates by simultaneously emphasizing gains in resiliency (through security, adaptability and/or autonomy) across all layers of the networking protocol and computation stacks as well as in throughput, latency, and connection density.

In this program, NSF is partnering with the Office of the Under Secretary of Defense for Research and Engineering (OUSD R&E), the National Institute of Standards and Technology (NIST) and a number of industry partners shown above. This program seeks to fund collaborative team research that transcends the traditional boundaries of individual disciplines to achieve the program goals.

Awards: Continuing Grant; Anticipated Funding Amount: $37,500,000 to $40,000,000

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 29, 2021

Contacts: Alexander Sprintson, CISE/CNS, telephone: (703) 292-8950, email: asprints@nsf.gov
• Murat Torlak, CISE/CNS, telephone: (703) 292-7748, email: mtorlak@nsf.gov
• Mohammod Ali, ENG/ECCS, telephone: (703) 292-4632, email: moali@nsf.gov

Back to Contents
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

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<tr>
<th>Track</th>
<th>Level</th>
<th>Deadlines</th>
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<td>Engaged Student Learning</td>
<td>Level 1: up to $300,000 for up to three years</td>
<td>July 21, 2021</td>
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<td>January 19, 2022</td>
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<td>3rd Wednesday in January and July thereafter</td>
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<td>Level 2: $300,001 - $600,000 for up to three years</td>
<td>July 21, 2021</td>
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<td>3rd Wednesday in July thereafter</td>
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<td>Level 3: $600,001 - $2 million for up to five years</td>
<td>July 21, 2021</td>
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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

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

Back to Contents

National Institutes of Health

Grant Program: BRAIN Initiative: Development and Validation of Novel Tools to Probe Cell-Specific and Circuit-Specific Processes in the Brain (R01 Clinical Trial Not Allowed)
Agency: National Institutes of Health RFA-MH-21-175
Brief Description: This Funding Opportunity Announcement (FOA) is designed to support development and validation of novel tools to facilitate the detailed analysis of cells and circuits and provide insights into the neural circuitry and structure underlying complex behaviors. The human brain consists of an estimated one hundred billion neurons and more than one trillion supporting glial cells that are uniquely organized to confer the extraordinary computational activities of the brain. Cell types are categorized by their anatomical position, neurotransmitter content, dendritic and axonal connections, receptor profile, gene expression profile, and distinct electrical properties. Although the human brain has long been the focus of numerous studies with major achievements made along the way, many specific details about the brain remain to be discovered, such as cell types and connections that are responsible for rapid information processing. Defining cellular and circuit-level function is dependent on detailed knowledge about the components and structure of the circuit. Such knowledge, in turn, is fundamental to understanding how these features underlie cognition and behavior, which should aid in the development of targeted cell-type and circuit-specific therapeutics to treat brain disorders. Improved technology is needed to obtain this knowledge.

This FOA solicits applications to develop next-generation, innovative technologies to define and target specific cell types in the brain. Of particular interest are first-in-class and/or cross-cutting non-invasive or minimally invasive techniques that permit repeated measurements from cells over time in a non-destructive manner. Tools/technologies relevant for this initiative are expected to be transformative, either through the development of novel tools that may be high-risk or through major advances in current approaches that break through technical barriers and will significantly improve current capabilities. An emphasis of the BRAIN initiative is the development of novel tools to study the brain, and here we highlight the need for innovative approaches to bridge experimental scales. Studies that are able to explore molecular and cellular mechanisms of neural activity permitting improved precision and sensitivity in the analysis of micro-and macro-circuits are strongly encouraged. Progress in understanding how the activity of the brain translates to complex behaviors will be facilitated by non-invasive approaches for both monitoring and manipulating neural activity in awake, behaving organisms.

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

Proposal Submission Deadline: October 08, 2021

All applications are due by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on the listed date(s). Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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

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Grant Program: NIH Director’s Early Independence Awards (DP5 Clinical Trial Optional)
Agency: National Institutes of Health RFA-RM-21-018
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-21-018.html

Brief Description: The NIH Director's Early Independence Award provides an opportunity for exceptional junior scientists to accelerate their entry into an independent research career by forgoing the traditional post-doctoral training period. Though most newly graduated doctoral-level researchers would benefit from post-doctoral training, a small number of outstanding junior investigators are capable of launching directly into an independent research career. The Early Independence Award is intended for these select junior investigators who have already established a record of scientific innovation and research productivity and have demonstrated unusual scientific vision and maturity; typical post-doctoral
training would unnecessarily delay their entry into independent research. The NIH Director’s Early Independence Award also provides an opportunity for institutions to invigorate their research programs by bringing in fresh scientific perspectives of the awardees they host. In order to support the most innovative and impactful research, the NIH recognizes the need to foster a diverse research workforce across the nation. Applications to this award program should reflect the full diversity of potential PDs/PIs, applicant institutions, and research areas relevant to the broad mission of NIH. Talented researchers from diverse backgrounds (see NOT-OD-20-031), including individuals from underrepresented racial and ethnic groups, individuals with disabilities, individuals from disadvantaged backgrounds, and women, are strongly encouraged to work with their institutions to develop applications for this Funding Opportunity Announcement.

Applications are welcome in all research areas broadly relevant to the mission of NIH. These areas include, but are not limited to, the behavioral, medical, natural, social, applied, and formal sciences. Research may be basic, translational, or clinical. The primary requirements are that the research be highly innovative and have the potential for unusually broad impact.

The NIH Director's Early Independence Award is part of the High-Risk, High-Reward Research program funded through the NIH Common Fund, which supports cross-cutting programs that are expected to have exceptionally high impact. All Common Fund initiatives invite investigators to develop bold, innovative, and often risky approaches to address problems that may seem intractable or to seize new opportunities that offer the potential for rapid progress.

To be eligible, investigators, at the time of application, must have received their most recent doctoral degree or completed clinical training within the previous fifteen months or expect to do so within the following twelve months. To be consistent with the updated NIH definition of Early Stage Investigators, eligible clinical training includes clinical residency and clinical fellowship. For full eligibility requirements, see Section III. Eligibility Information.

Awards: Awards will be for up to $250,000 in direct costs per year, plus applicable Facilities and Administrative (F&A) costs.

Letter of Intent: August 3, 2021
All applications are due by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on the listed date(s).
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.
Contact: Becky Miller, Ph.D.; Office of the Director (OD); Telephone: 301-594-9979
Email: earlyindependence@od.nih.gov

Grant Program: Translational Neural Devices (U44 Clinical Trial Optional))
Agency: National Institutes of Health RFA-NS-21-022
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-21-022.html
Brief Description: This FOA supports non-clinical testing to enable IRB and/or FDA approval needed to conduct a small clinical study, and the subsequent study itself (e.g., Early Feasibility Study - https://www.fda.gov/downloads/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm279103). All projects will be Fast-Track applications and have two phases. SBIR Phase I will support non-clinical translational device activities to obtain an IDE and IRB approval for an SR clinical study, or to obtain IRB approval for an NSR clinical study. The duration of SBIR Phase I will depend on the maturity of the project at entry. Phase II will support a small clinical study and can last up to three years, however, the total project period (including both phases) must not exceed five years. Projects for which only a clinical phase is proposed are outside of the scope of this funding opportunity. Only those SBIR
Phase I projects that have met specific criteria (see below) will be eligible for transition to SBIR Phase II after NIH administrative review. Furthermore, ethical considerations are intrinsic to the responsible conduct of neuroscience research and the translation of neuroscience advances (scientific and technological) into clinical practice.

**Awards:** Applicants should rarely exceed $1,000,000 in total costs per year during the SBIR Phase I and $1,500,000 in total costs per year during the SBIR Phase II.

**Letter of Intent:** 60 days prior to the receipt date.

**Proposal Submission Deadline:**
- July 1, 2021; October 20, 2021; February 18, 2022; June 20, 2022; October 18, 2022; February 21, 2023; June 19, 2023; October 18, 2023; February 20, 2024

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-21-012.html) 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:** Eric Hudak, Ph.D.; National Institute of Neurological Disorders and Stroke (NINDS); Telephone: 301-496-1779; Email: NINDS-Devices@nih.gov

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**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


**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](https://neuroscienceblueprint.nih.gov) 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](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.
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

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**Grant Program:** BRAIN Initiative: Targeted BRAIN Circuits Projects- TargetedBCP (R01 Clinical Trial Not Allowed)  
**Agency:** National Institutes of Health RFA-NS-21-013  
**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

[Back to Contents](#)

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**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/](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:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Solicitation YIP questions due</td>
<td>30 Apr 2021</td>
</tr>
<tr>
<td>Pre-Solicitation YIP answers posted</td>
<td>14 May 2021</td>
</tr>
<tr>
<td>White Paper submissions due</td>
<td>31 May 2021</td>
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</tbody>
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**Grant Program: Biological Technologies**

**Agency:** Department of Defense DARPA - Biological Technologies Office HR001121S0025

**Website:** [https://beta.sam.gov/opp/dfe93a5637fe419a8ea392ee949f9c79/view](https://beta.sam.gov/opp/dfe93a5637fe419a8ea392ee949f9c79/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.

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


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**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](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.

**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-afrl-center-of-excellence-in-brain-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.apan.org/wg/afosr/p/submitawhitepaper 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

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**Grant Program:** Defense Manufacturing Communities Support Program  
**Agency:** Department of Defense OLDC-21-F-0001  
**Website:** [https://oldcc.gov/Defense-Manufacturing-Community-Support-Program](https://oldcc.gov/Defense-Manufacturing-Community-Support-Program)  
**Brief Description:** The DMCSP 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 (DMCSP) 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

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**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](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 Anita.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.

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**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.

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.ccdc-arl.mbx.aro-muri@mail.mil; AFOSR 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.

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

Letter of Intent: Not Required
Proposal Deadline: Apr 30, 2021 Application deadline is 4/30/2021 at 5:00pm Eastern Time.
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/).
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
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). 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.

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
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: Total Anticipated Funding: $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 Roosa Management Analyst; Ph: 301-975-3007 Agency Contact

Grant Program: FY2021 to FY2023 NOAA Broad Agency Announcement (BAA)
Agency: U.S. Department of Commerce NOAA-NFA-NFAP-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 obligate 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

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

Department of Energy

Grant Program: Assisting Federal Facilities with Energy Conservation Technologies (AFFECT)
Agency: Department of Energy Golden Field Office DE-FOA-0002472
Brief Description: As part of the DOE Office of Energy Efficiency and Renewable Energy (EERE), the Federal Energy Management Program’s (FEMP) priority is to help federal agencies advance the energy efficiency and resilience of their operations, while addressing climate change and minimizing the carbon footprint. FEMP assists Federal agencies in meeting energy- and climate change-related goals by bringing expertise from all levels of project and policy implementation to identify affordable solutions and facilitate public-private partnerships.

DOE and FEMP intend to play a leading role in meeting the challenge facing our nation and our planet from climate change through advancing a plan to lead the world in building a clean energy economy to address the climate emergency. DOE and FEMP will use its resources to turn the threat of climate change into an opportunity by catalyzing our partners across the Federal government to lead through the power of example toward the goal of building a 100% clean energy economy with net-zero emissions.

FEMP’s Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) 2021 FAC will provide direct funding to Federal agencies for the development of energy and water efficiency projects and processes that address climate change mitigation and/or adaptation. The purpose of the AFFECT 2021 FAC funding is to initiate, supplement, improve or otherwise increase the viability and adoption of climate change mitigation and adaptation actions entailing energy efficiency, clean energy, and operational resilience at U.S. Federal government-owned facilities. This is accomplished through leveraging the use of a privately financed performance contract in the form of an Energy Savings Performance Contract (ESPC), ENABLE contract, or Utility Energy Service Contract (UESC) to enhance Federal agency climate change mitigation via energy efficiency, clean energy, and adaptation at mission critical sites. The AFFECT 2021 FAC is expected to provide ‘value added’ additions to projects allowing for greater impact from the projects in terms of energy cost savings and greenhouse gas (GHG) mitigation, enhanced climate change adaptation and resilience. FEMP also intends for the AFFECT 2021 FAC to provide demonstrated opportunities for replication of projects at other Federal facilities, while building a diversified workforce within the clean energy economy in construction, skilled trades, and engineering to enhance American infrastructure.

Applications must address either or both of the Climate Change Adaptation-Resilient and/or Efficient Areas of Interest identified below, and describe a Replicability Plan highlighting (a) how replication and/or scalability across the agencies’ enterprises will be promoted, and (b) agree to develop a Government Use Case for leveraging across applicable U.S. Federal government-owned facilities.

Awards: FEMP expects to make a total of approximately $13,000,000 of Federal funding available for new awards under this FAC for 13 to 20 awards.

Letter of Intent: Not Required

Submission Deadline: July 16, 2021 at 5:00pm ET

Contact: For questions related to the EERE Exchange website: EERE-ExchangeSupport@hq.doe.gov
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 2050”\(^1\)” 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, 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

\(^1\) Executive Order 14008, “Tackling the Climate Crisis at Home and Abroad,” January 27, 2021.
**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

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**NASA**

**Grant Program: Early Stage Innovations (ESI)**

**Agency:** NASA 80HQTR21NOA01-21ESI-B2


**Brief Description:** This Appendix seeks proposals on specific space technologies that are currently at low Technology Readiness Levels (TRL). Investment in innovative low-TRL research increases knowledge and capabilities in response to new questions and requirements, stimulates innovation, and allows more creative solutions to problems constrained by schedule and budget. Moreover, it is investment in fundamental research activities that has historically benefited the Nation on a broader basis, generating new industries and spin-off applications. This Appendix seeks proposals to develop unique, disruptive, or transformational space technologies that have the potential to lead to dramatic improvements at the system level — performance, weight, cost, reliability, operational simplicity, or other figures of merit associated with space flight hardware or missions. The projected impact at the system level must be substantial and clearly identified. Although system-level demonstrations are likely not possible or expected under an ESI award, meaningful TRL advancement is required. This Appendix does not seek literature searches, survey activities or incremental enhancements to the current state of the art (SOA).

**Topic 1 – Advanced Materials for High-Voltage Power Transmission on the Moon**

**Topic 2 – Development of Quantum Communication Technologies**

**Topic 4 – Supersonic Retropropulsion Wind Tunnel Data Analysis**

**Topic 5 – Advanced Heat Rejection Technologies for Space-Flight Radiators**

**Awards:** NASA plans to make approximately 10 awards - across all topics -

**Notice of Intent:** Notices of Intent Due: May 26, 2021

**Proposal Deadline:** Proposals Due: June 28, 2021

**Contact:** Claudia Meyer Space Technology Research Grants Program Executive hq-esi-call@mail.nasa.gov

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**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](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

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**Grant Program: ROSES 2021: Heliophysics Mission Concept Studies**

**Agency:** NASA NNH21ZDA001N-HMCS


**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

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**Grant Program: ROSES 2021: Living With a Star Science**

**Agency:** NASA NNH21ZDA001N-LWS

**Website:** [https://nspires.nasaprs.com/external/solicitations/summary.do?sollId=%7BBDD29C108-980F-6F1A-AEC7-CE7375E35007%7D&path=&method=init](https://nspires.nasaprs.com/external/solicitations/summary.do?sollId=%7BBDD29C108-980F-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

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

**Agency:** NASA NNH21ZDA001N-NIP


**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/](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

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**Grant Program: Earth Science Applications: Health and Air Quality**

**Agency:** NASA NNH21ZDA001N-HAQ
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

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.
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

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**Private Foundations**

**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.

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

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.