

# NJIT Research Newsletter

Issue: ORN-2021-20

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

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## Special Announcements

### **Limited Submission Internal Competition for NSF PFI Program**

**Grant Program:** Partnerships for Innovation (PFI)

**Agency:** National Science Foundation NSF 19-506

**RFP Website:** <https://www.nsf.gov/pubs/2019/nsf19506/nsf19506.htm>

**Brief Description:** The Partnerships for Innovation (PFI) Program within the Division of Industrial Innovation and Partnerships (IIP) offers researchers from all disciplines of science and engineering funded by NSF the opportunity to perform translational research and technology development, catalyze partnerships and accelerate the transition of discoveries from the laboratory to the marketplace for societal benefit.

PFI has five broad goals, as set forth by the American Innovation and Competitiveness Act of 2017 (“the Act”, [S.3084 — 114th Congress](#); [Sec. 602. Translational Research Grants](#)): (1) identifying and supporting NSF-sponsored research and technologies that have the potential for accelerated commercialization; (2) supporting prior or current NSF-sponsored investigators, institutions of higher education, and non-profit organizations that partner with an institution of higher education in undertaking proof-of-concept work, including the development of technology prototypes that are derived from NSF-sponsored research and have potential market value; (3) promoting sustainable partnerships between NSF-funded institutions, industry, and other organizations within academia and the private sector with the purpose of accelerating the transfer of technology; (4) developing multi-disciplinary innovation ecosystems which involve and are responsive to the specific needs of academia and industry; (5) providing professional development, mentoring, and advice in entrepreneurship, project management, and technology and business development to innovators. This solicitation offers two broad tracks for proposals in pursuit of the aforementioned goals:

The Technology Translation (PFI-TT) track offers the opportunity to translate prior NSF-funded research results in any field of science or engineering into technological innovations with promising commercial potential and societal impact. PFI-TT supports commercial potential demonstration projects for academic research outputs in any NSF-funded science and engineering discipline. This demonstration is achieved through proof-of-concept, prototyping, technology development and/or scale-up work. Concurrently, students and postdoctoral researchers who participate in PFI-TT projects receive education and leadership training in innovation and entrepreneurship. Successful PFI-TT projects generate technology-driven commercialization outcomes that address societal needs.

The Research Partnerships (PFI-RP) track seeks to achieve the same goals as the PFI-TT track by supporting instead complex, multi-faceted technology development projects that are typically beyond the scope of a single researcher or institution and require a multi-organizational, interdisciplinary, synergistic collaboration. A PFI-RP project requires the creation of partnerships between academic researchers and third-party organizations such as industry, non-academic research organizations, federal laboratories, public or non-profit technology transfer organizations or other universities. Such partnerships are needed to conduct applied research on a stand-alone larger project toward commercialization and societal impact. In the absence of such synergistic partnership, the project’s likelihood for success would be minimal.

The intended outcomes of both PFI-TT and PFI-RP tracks are: a) the commercialization of new intellectual property derived from NSF-funded research outputs; b) the creation of new or broader collaborations with industry (including increased corporate sponsored research); c) the licensing of NSF-funded research outputs to third party corporations or to start-up companies funded by a PFI team; and d) the training of future innovation and entrepreneurship leaders.

**Limit on Number of Proposals per Organization:** There is no limit on the number of PFI-TT proposals an organization may submit to a deadline of this solicitation. However, an organization may not submit more than one (1) new or resubmitted PFI-RP proposal to a deadline of this solicitation. This eligibility constraint will be strictly enforced. If an organization exceeds this limit, the first PFI-RP proposal received will be accepted, and the remainder will be returned without review. An organization may not receive more than two (2) awards from a submission deadline of this solicitation.

**Internal Competition:** If you are interested in submitting **PFI-RP track proposal**, please submit a pre-proposal to your college dean by June 1, 2021 using the following format. Each college dean is requested to forward maximum one pre-proposal with college recommendation to Atam Dhawan,

SVPR at [dhawan@njit.edu](mailto:dhawan@njit.edu) by June 4, 2021. The selection of one institutional PFR-RP proposal will be announced by June 7, 2021. Institutional pre-proposal should follow the following format:

1. Cover Page: Title and list of all key investigators (including collaborators and partners) with their affiliations and roles
2. Project Summary with Intellectual Merit and Broader Impact (max 1 page)
3. Project Description: Significance, Innovation, Approach and Partnership Management Plan (max 3 pages)
4. Budget Request Outline: NJIT and subcontracts (max 1 page)

**Awards:** Standard Grants. Anticipated Funding: \$20,000,000; Number of Awards: 55-65

**Letter of Intent:** Not Required

**Proposal Submission Deadline:** July 14, 2021

**Contacts:** Jesus V. Soriano, telephone: (703) 292-7795, email: [jsoriano@nsf.gov](mailto:jsoriano@nsf.gov)

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### [Grant Opportunity Alerts](#)

Keywords and Areas Included in the Grant Opportunity Alert Section Below

**[NSF:](#) NSF Program on Fairness in Artificial Intelligence in Collaboration with Amazon (FAI); Geoinformatics (GI); Resilient & Intelligent NextG Systems (RINGS)**

**[NIH:](#) NIH Director's New Innovator Award Program (DP2); Clinical Trial Optional); T32 Training Program for Institutions That Promote Diversity (T32); Joint NINDS/NIMH Exploratory Neuroscience Research Grant (R21); Summer Research Education Experience Program (R25); NIMH Exploratory/Developmental Research Grant (R21)**

**[Department of Defense/US Army/DARPA/ONR:](#) DOD Hearing Restoration Focused Research Award; Counterterrorism and Forensic Science Research: Visiting Scientist Program; DOD Vision, Translational Research Award; ONR Global Research Opportunity: Global-X Challenge; Minerva Research Initiative; Air Force Fiscal Year 2022 Young Investigator Research Program (YIP); 2021 ERDC Broad Agency Announcement**

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

**[Department of Agriculture:](#) NRCS's Conservation Innovation Grants (CIG) Classic Program; 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:](#) Oceanic and Atmospheric Research (OAR); EDA University Center Competition – CRO; 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:](#) Quantum Horizons: QIS Research and Innovation for Nuclear Science; Assisting Federal Facilities with Energy Conservation Technologies (AFFECT)**

**[NASA:](#) ROSES 2021: Heliophysics Innovation in Technology and Science; Early Stage Innovations (ESI); ROSES 2021: Instrument Incubator Program; ROSES 2021: Living With a Star Science; New (Early Career) Investigator Program in Earth Science**

**[National Endowment of Humanities:](#) Fellowship Programs at Independent Research Institutions; Digital Projects for the Public; Humanities Initiatives**

**Private Foundations: Special Funding Program: Israel-US Fund Seeking Proposals for Clean-Energy Joint Research**

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**Recent Research Grant and Contract Awards**

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

**PI:** Edward Dreizin (PI)

**Department:** Chemical and Material Engineering

**Grant/Contract Project Title:** A URA for Materials Science in Extreme Environments

**Funding Agency:** DTRA - Defense Threat Reduction Agency

**Duration:** 07/01/20-12/31/21

**PI:** Xianqin Wang (PI)

**Department:** Chemical and Material Engineering

**Grant/Contract Project Title:** Mechanistic Study of N<sub>8</sub>- Polynitrogen Synthesis and its Oxygen Reduction Reaction (Supplement)

**Funding Agency:** NSF

**Duration:** 09/01/18-08/31/22

**PI:** Gal Haspel (PI)

**Department:** Biological Sciences

**Grant/Contract Project Title:** Functional Logic of Neural Circuits: Diamonds in the Rough

**Funding Agency:** NSF

**Duration:** 05/15/21-04/30/22

**PI:** Xiaoyang Xu (PI)

**Department:** Chemical and Material Engineering

**Grant/Contract Project Title:** COVID-19 and Beyond - A Novel Temperature-Stable Nanomedicine Cocktail mRNA Vaccine for COVID-19

**Funding Agency:** Pfeiffer Foundation

**Duration:** 05/01/21-04/30/21

**PI:** Qing Liu (PI)

**Department:** Electrical and Computer Engineering

**Grant/Contract Project Title:** Science Driven Data Management for Multi-Tiered Storage (SIRIUS) Project 2.0

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

**Duration:** 05/14/21-09/30/25

**PI:** Yi Chen (PI)

**Department:** MT School of Management

**Grant/Contract Project Title:** New Jersey Alliance for Clinical and Translational Science: NJ ACTS

**Funding Agency:** NIH

**Duration:** 03/06/19-02/28/22

**PI:** Wei Zhi (PI)

**Department:** Informatics

**Grant/Contract Project Title:** New Jersey Alliance for Clinical and Translational Science: NJ ACTS

**Funding Agency:** NIH

**Duration:** 03/16/19-02/28/22

**PI:** James Geller (PI)

**Department:** Computer Science

**Grant/Contract Project Title:** New Jersey Alliance for Clinical and Translational Science: NJ ACTS

**Funding Agency:** NIH

**Duration:** 03/16/19-02/28/22

**PI:** Guiling Wang (PI) and Dantong Yu (Co-PI)

**Department:** Computer Science and MT School of Management

**Grant/Contract Project Title:** New Jersey Alliance for Clinical and Translational Science: NJ ACTS

**Funding Agency:** NIH

**Duration:** 03/16/19-02/28/22

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

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

**Update on ENDLESS FRONTIER ACT:** The House Committee on Science, Space, and Technology Subcommittee on Research and Technology's markup of the National Science Foundation (NSF) for the Future Act (H.2225) to reauthorize and add funding to NSF proceeded without a hitch. There was unanimous agreement to boost NSF's overall budget by 116% over five years, to \$18.3 billion in 2026. Funding for traditional programs would rise to \$13.2 billion, essentially the same level as in the Endless Frontier Act, however, the new NSF Directorate, called the Science and Engineering Solutions in the House bill, would be significantly smaller than that envisioned by the Senate, starting at \$1 billion in 2022 and growing to \$5.1 billion by 2026. A big reason for the greater agreement on the House side is that the legislation is limited to reauthorizing NSF programs whereas the Endless Frontier Act includes other provisions, including an amendment adopted last week funding DOE labs and full reauthorization of programs at NASA.

Of note, the President has expressed support for investing \$50 billion over several years in a Technology Directorate at NSF, but his Fiscal Year 2022 (FY22) budget outline only requested a 20% increase to \$10.2 billion at NSF, without specifying any base funding for the Directorate.

In other FY22 budget news, last week the House Energy and Commerce Subcommittee on Health held a hearing on the FY22 U.S. Department of Health and Human Services' budget which included some discussion of the proposed creation of the Advanced Research Projects Agency-Health (ARPA H) at the National Institutes of Health.

**Next Generation Supercomputing Bill Introduced in the House:** As the Energy Department [prepares to launch](#) America's first of several next-generation exascale supercomputers, a couple Republican lawmakers want Congress to consider future-facing investments for the even higher performing machines

that will follow. Rep. Jay Obernolte, R-Calif., [recently introduced](#) the Next Generation Computing Research and Development Act, which lays out multiple provisions intended to help pave the way for systems and technologies that will surpass classical computing capabilities. “The future of innovation lies in our ability to unlock new answers about the workings of our world,” Obernolte said in a statement. “Those answers will only come with the help of the next generation of supercomputers.”

Guided by the general scale of high-performance system capabilities, [exascale](#) is next to be reached. The in-the-works, advanced systems will be able to perform a billion-billion operations per second. They are essentially a 10x order of magnitude more powerful than the fastest contemporary supercomputers. Eyeing what comes after that, Obernolte said this new legislation would help U.S. scientists and students uncover new answers to challenges that involve predicting weather patterns, strengthening our energy grid and more.

Specifically, the 9-page bill—shared with *Nextgov* Thursday—calls for the Energy Department to implement a “research, development, and demonstration program to advance computational and networking capabilities to analyze, model, simulate, and predict complex phenomena relevant to the development of new energy technologies and the competitiveness of the United States.” The agency has already made a few [moves to ready](#) for the after-exascale era, but the legislation would further form an initiative “to develop and implement a strategy for achieving computing systems with capabilities beyond exascale computing systems.” The bill would also promote a program encompassing the fundamental research, development, and demonstration of energy efficient computing technologies “relevant to advanced computing applications in high performance computing, artificial intelligence, and scientific machine learning.” 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](#).

**President's FY 2022 Discretionary Funding Request:** For complete information on the President's FY 2022 discretionary funding request, please visit: <https://www.whitehouse.gov/omb/FY-2022-Discretionary-Request/>. President's FY 2022 budget includes:

**U.S. Department of Education**

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

**U.S. Department of Health and Human Services**

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

**U.S. Department of Commerce**

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

**U.S. Department of Energy (DOE)**

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

**National Science Foundation (NSF)**

- **Topline:** \$10.2 billion, a \$1.7 billion or 20% increase over the FY21 level
- **New Directorate for Technology, Innovation, and Partnerships:** The Directorate would work with programs across the Agency and with other existing Federal and non-Federal entities to expedite technology development in emerging areas that are crucial for U.S. technological leadership, including artificial intelligence, high performance computing, disaster response and

resilience, quantum information systems, robotics, advanced communications technologies, biotechnology, and cybersecurity.

- **Enhances Fundamental Research and Development:** \$9.4 billion, an increase of \$1.6 billion above the FY21 level, to support research across the spectrum of science, engineering, and technology, including biological sciences, computer and information sciences, engineering, geosciences, math and physical sciences, social, behavioral, and economic sciences, and education.
- **Advances Climate Science and Sustainability Research:** \$1.2 billion for climate and clean energy related research, an increase of \$500 million above the FY21 level. NSF would fund a broad portfolio of research related to climate science and clean energy, including research on atmospheric composition, water and carbon cycles, modeling climate systems, renewable energy technologies, materials sciences, and social, behavioral, and economic research on human responses to climate change.

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### [Webinar and Events](#)

#### **Event: International funding opportunity: Recovery, Renewal and Resilience in a Post-Pandemic World**

**Sponsor:** NSF

**When:** May 27, 2021; 12:00 PM - 2:00 PM

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=302665&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=302665&org=NSF)

**Brief Description:** Recovery, Renewal and Resilience in a Post-Pandemic World is a new international funding opportunity supporting social, behavioral and economic science research on the impacts of the COVID-19 pandemic. Organized through the Trans-Atlantic Platform, the endeavor is a partnership between the U.S. National Science Foundation's Directorate for Social, Behavioral and Economic Sciences and scientific funding agencies in 11 other countries.

**An informational webinar will be held on May 27 from noon – 2 p.m. EDT.**

Researchers, administrative staff and others in the social, behavioral and economic sciences community are encouraged to attend. Featured speakers include NSF Assistant Director Arthur Lupia, head of the Social, Behavioral and Economic Sciences Directorate, NSF senior advisor Deborah Olster and NSF program director Kwabena Gyimah-Brempong.

Attendees will have an opportunity to ask questions during a live Q&A session.

- **Registration is required.** See [webinar registration page](#).
- **Real-time captions will be available during the meeting.** See [webinar captions page](#).
- If you require additional reasonable accommodations, please contact [nfsbemtgsupport@nsf.gov](mailto:nfsbemtgsupport@nsf.gov) by May 25.
- A video will be available after the event for those unable to attend the live presentations.

**To Join the Webinar:** For full program details, see [Trans-Atlantic Platform Recovery, Renewal, and Resilience in a Post-Pandemic World \(T-AP RRR\)](#).

#### **Event: Resilient & Intelligent NextG Systems (RINGS) (NSF 21-581) Program Webinar**

**Sponsor:** NSF

**When:** May 27, 2021; 2:00 PM - 5:00 PM

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=302634&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=302634&org=NSF)

**Brief Description:** The RINGS program ([NSF 21-581](#)) 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.

**To Join the Webinar:** Please register at

[https://nsf.zoomgov.com/webinar/register/WN\\_qn6MXZpJSEWcHAZa-11f-g](https://nsf.zoomgov.com/webinar/register/WN_qn6MXZpJSEWcHAZa-11f-g)

Join by Phone; 669-254-5252; Meeting ID: 160 695 8932; asscode: 995121

#### **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](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.

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

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## Grant Opportunities

### National Science Foundation

**Grant Program: NSF Program on Fairness in Artificial Intelligence in Collaboration with Amazon**  
**Agency: National Science Foundation NSF 21-585**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21585/nsf21585.htm>

**Brief Description:** NSF has long supported transformative research in artificial intelligence (AI) and machine learning (ML). The resulting innovations offer new levels of economic opportunity and growth, safety and security, and health and wellness, intended to be shared across all segments of society. Broad societal acceptance of large-scale deployments of AI systems rely critically on their trustworthiness which, in turn, depends on the ability to assess and demonstrate the fairness (including broad accessibility and utility), transparency, explainability, impartiality, inclusivity, and accountability of such systems. For example, the behavior of algorithms for face recognition, speech, and language, especially when integrated into decision support systems applied across different segments of society, would benefit from new foundational research in fairness of AI systems.

NSF and Amazon are partnering to jointly support computational research focused on fairness in AI, with the goal of contributing to trustworthy AI systems that are readily accepted and deployed to tackle grand challenges facing society. Specific topics of interest include, but are not limited to transparency, explainability, accountability, inclusivity, potential adverse biases (including social biases) and effects, mitigation strategies, algorithmic advances, fairness objectives, validation of fairness, participatory design, and advances in broad accessibility and utility. Funded projects will enable broadened acceptance of AI systems, helping the U.S. to further capitalize on the potential of AI technologies. Although Amazon provides partial funding for this program, it will not play a role in the selection of proposals for award.

Advancing AI is a highly interdisciplinary endeavor drawing on fields such as computer science, information science, engineering, statistics, mathematics, cognitive science, psychology, sociology, decision science, and economics. Considerations of practice, often derived from the social, behavioral, and economic sciences, can inform new directions for computational science to better realize the benefits of algorithmic and data fairness. As such, NSF and Amazon expect these varied perspectives to be critical for the study of fairness in AI. NSF's ability to bring together multiple scientific disciplines uniquely positions the agency in this collaboration, while building AI that is fair and unbiased is an important aspect of Amazon's AI initiatives. This program supports the conduct of fundamental computer science research into theories, techniques, and methodologies that go well beyond today's capabilities and are motivated by challenges and requirements in real systems.

**Awards:** Standard Grant or Continuing Grant; Anticipated Funding Amount: \$7,600,000

**Award Size:** \$600,000 up to a maximum of \$1,000,000 for periods of up to 3 years.

**Letters of Intent:** Not Required

**Full Proposal Submission Deadline:** August 03, 2021

**Contacts:** Todd Leen, Program Director, CISE/IIS, phone: (703) 292-8930, email: [tleen@nsf.gov](mailto:tleen@nsf.gov)

- Sylvia Spengler, Program Director, CISE/IIS, phone: (703) 292-8930, email: [sspengle@nsf.gov](mailto:sspengle@nsf.gov)
- Steven Breckler, Program Director, SBE/BCS, phone: (703) 292-7369, email: [sbreckle@nsf.gov](mailto:sbreckle@nsf.gov)

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**Grant Program: Geoinformatics (GI)**

**Agency: National Science Foundation NSF 21-583**

**RFP Website:** <https://www.nsf.gov/pubs/2021/nsf21583/nsf21583.htm>

**Brief Description:** The Division of Earth Sciences (EAR) will consider proposals for the development of cyberinfrastructure (CI) for the Earth Sciences (Geoinformatics). EAR-supported geoinformatics

opportunities will fit into three tracks: Catalytic Track, Facility Track, and Sustainability Track. These tracks broadly support the lifecycle of geoinformatics resource development, from pilots (Catalytic) to broad implementation (Facility) to sunseting and long-term sustainability (Sustainability).

The **GI Catalytic Track** will support pilot geoinformatics development efforts that are intended to serve Earth Science research.

The **GI Facility Track** will support awards for implementation and operation of a cyberinfrastructure resource relied upon by one or more Earth Science communities to address science questions.

The **GI Sustainability Track** will support development and implementation of sustainable funding models to preserve data and software products of value to Earth Science research.

**Awards:** Standard Grant or Continuing Grant or Cooperative Agreement; Anticipated Funding

Amount: \$5,300,000 annually, pending the availability of funds.

**Letters of Intent:** Not Required

**Full Proposal Submission Deadline:** August 16, 2021

**Contacts:** Raleigh Martin, telephone: (703) 292-7199, email: [ramartin@nsf.gov](mailto:ramartin@nsf.gov)

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### **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.

**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 [EHRRacequityPD@nsf.gov](mailto:EHRRacequityPD@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](mailto:asprints@nsf.gov)

- Murat Torlak, CISE/CNS, telephone: (703) 292-7748, email: [mtorlak@nsf.gov](mailto:mtorlak@nsf.gov)
- Mohammod Ali, ENG/ECCS, telephone: (703) 292-4632, email: [moali@nsf.gov](mailto:moali@nsf.gov)

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## [National Institutes of Health](#)

### **Grant Program: NIH Director's New Innovator Award Program (DP2 Clinical Trial Optional)**

**Agency: National Institutes of Health RFA-RM-21-016**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-21-016.html>

**Brief Description:** The [NIH Director's New Innovator Award](#) addresses two important goals: stimulating highly innovative research and supporting promising Early Stage Investigators. Early Stage Investigators may have exceptionally innovative research ideas, but not the preliminary data required to fare well in the traditional NIH peer review system. As part of NIH's commitment to increasing opportunities for Early Stage Investigators, it has created the NIH Director's New Innovator Award to support outstandingly creative Early Stage Investigators who propose highly innovative research projects with the potential for unusually high impact. This award complements ongoing efforts by the NIH and its Institutes and Centers to fund Early Stage Investigators through R01 grants and other mechanisms. The definition of Early Stage Investigator is provided [here](#).

The NIH Director's New Innovator Award is different from traditional NIH grants in several aspects. It is designed specifically to support unusually creative investigators with highly innovative research ideas at an early stage of their career when they may lack the preliminary data required for a conventional R01 grant application. The emphasis is on innovation and creativity; preliminary data are not required but may be included. The review process emphasizes the individual's creativity, the innovativeness of the research approaches, and the potential of the project, if successful, to have a significant impact on an important biomedical or behavioral research problem.

**There are three important differences from previous FOAs for the New Innovator Award.** First, awards will be in two multi-year funded segments of three-years and two-years. Second, a PHS 2590 Non-Competing Continuation Progress Report (not a Multi-Year Funded Research Performance Progress Report (RPPR)) must be submitted in year three for funding the second award segment. Third, Detailed Budget pages must be completed according to the special instructions provided in this FOA.

The NIH Director's New Innovator Award is part of the [High-Risk, High-Reward Research \(HRHR\) 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.

**Awards:** Awards will be in two multi-year segments of three years and two years. The three-year segment will have an award budget up to \$900,000 in direct costs. The two-year segment will have an award budget up to \$600,000.

**Letter of Intent:** Not Applicable

**Proposal Submission Deadline:** August 20, 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:** Ravi Basavappa, Ph.D., Office of the Director (OD), Telephone: 301-435-7204  
Email: [NewInnovatorAwards@mail.nih.gov](mailto:NewInnovatorAwards@mail.nih.gov)

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### **Grant Program: T32 Training Program for Institutions That Promote Diversity (T32 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-HL-22-001**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-HL-22-001.html>

**Brief Description:** The NHLBI encourages research training and career development crossing disciplinary boundaries (examples: biophysics, biostatistics, bioinformatics, bioengineering, systems science, and big data science) to develop a new interdisciplinary workforce. Also of interest to NHLBI are training and career development efforts that focus on implementation research, which studies the optimal and sustainable delivery of evidence-based interventions. Novel strategies are needed to disseminate and implement "real world" interventions that produce optimal health outcomes, particularly in underserved populations.

Dependent on the proposed training program, resident scientific resources and personnel, applicant institutions may choose to identify and collaborate with a research center (medical school or comparable institution) that has strong, well-established cardiovascular, pulmonary, or hematologic diseases research and research training programs to help meet research training needs. NHLBI anticipates that this arrangement will provide each trainee with a mentor who is recognized as an accomplished investigator in cardiovascular, pulmonary, or hematologic diseases and sleep disorders research and who will assist the research advisor at the applicant institution with the trainee's development and research plan. NHLBI expects plans for summer training as well as academic year training to be developed by the student and advisor at the trainee's home institution in collaboration with the mentor at the research center. It is expected that the mentor(s) will guide the trainee through the initial training period and continue this interaction throughout the award. The development of strong mentoring relationships is essential to the success of the trainees and the program.

**Awards:** Application budgets should not exceed \$322,000 per year in direct costs. However, applications should reflect the actual needs of the proposed project.

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

**Proposal Submission Deadline:** September 13, 2021, February 28, 2022

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:** Traci Mondoro, PhD, National Heart, Lung, And Blood Institute (NHLBI)  
Telephone: 301-435-0050, E-mail: [NHLBI\\_Blood\\_Training@nhlbi.nih.gov](mailto:NHLBI_Blood_Training@nhlbi.nih.gov)

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## **Grant Program: Joint NINDS/NIMH Exploratory Neuroscience Research Grant (R21 Clinical Trial Optional)**

**Agency:** National Institutes of Health PA-21-219

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PA-21-219.html>

**Brief Description:** The Joint NINDS/NIMH Exploratory Neuroscience Research Grant program supports exploratory and foundational research projects that fall within the scientific missions of the NINDS and NIMH. Awards will provide support for the early and conceptual stages of these projects. These studies may involve considerable risk, but may lead to breakthroughs in important areas of neuroscience, or to the development of novel techniques, reagents, methodologies, or models, of high value to the neuroscience community. The evolution and vitality of neuroscience require a constant infusion of new ideas, techniques, and points of view. These may differ substantially from current thinking or practice, and may not yet be supported by substantial preliminary data.

This program is intended to encourage research that will explore new ideas, and advance early stages of projects. For example, such projects could assess the feasibility of a novel area of investigation or a new experimental system that has the potential to enhance neuroscience related research. Another example could include the unique and innovative use of an existing methodology to explore a new area of neuroscience.

**Awards:** Direct costs are limited to \$275,000 over a two-year period, with no more than \$200,000 in direct costs allowed in any single year.

**Letter of Intent:** Not Applicable

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

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:** Karrah Benson, National Institute of Neurological Disorders and Stroke (NINDS)  
Telephone: 301-496-0838, Email: [Karrah.benson@nih.gov](mailto:Karrah.benson@nih.gov)

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**Grant Program: Summer Research Education Experience Program (R25 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health PAR-21-168**

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-21-168.html>

**Brief Description:** The overarching goal of this R25 program is to support educational activities that complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs.

To accomplish the stated over-arching goal, this FOA will support creative educational activities with a primary focus on:

- **Research Experiences:** For high school students, undergraduate students, and/or science teachers during the summer academic break. Proposed programs should provide authentic "open-ended", hands-on exposure to research in a laboratory or a field setting as part of a comprehensive program based in sound educational practices designed to stimulate the interest and advance the knowledge base of participants. In addition to hands-on research experiences, programs are expected to include complementary activities that support the participants' scientific development, such as scientific writing and presentation skills and training in rigor and reproducibility. Programs should consider the needs of the intended participants and the likelihood of improving their knowledge and/or skills when designing the research program. Programs should have clear goals and objectives appropriate for the educational level of the audience to be reached (high school and/or undergraduate students or science teachers), including the content to be conveyed, and the intended outcome(s). Outcomes for high school and college students may include: to reinforce their intent to graduate with a science degree, prepare them for graduate or medical school admissions, and/or prepare them for careers in research.. Support for science teachers will be limited to those programs with a clear plan for how teachers will utilize their summer experience in their teaching during the school year, such as enhancing the STEM curriculum or increasing number of STEM courses taught.

R25 programs that propose at least 8 weeks, but fewer than 15 weeks, of full-time research experiences during the summer may request continued part-time support for the participants to work on their research projects during the school year, up to the equivalent of a total of 15 weeks of full-time participation, as long as the entire research experience is completed within a 12-month period.

**Awards:** Although the size of award may vary with the scope of the Summer Research Program proposed, budgets cannot exceed \$125,000 direct costs per year.

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

**Proposal Submission Deadline:** March 17, 2022, March 17, 2023, and March 19, 2024

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:** Laura E. Kwako, Ph.D.; National Institute on Alcohol Abuse and Alcoholism (NIAAA); Telephone: 301-451-8507; Email: [laura.kwako@nih.gov](mailto:laura.kwako@nih.gov)

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**Grant Program: NIMH Exploratory/Developmental Research Grant (R21 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health PA-21-235**

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PA-21-235.html>

**Brief Description:** NIMH aims to improve mental health across the lifespan for all individuals and groups through support of a diversified portfolio of scientific approaches, including basic, translational, and implementation science. NIMH seeks to transform the mental health research landscape by supporting the development of cutting edge techniques and methods. This FOA encourages novel projects that advance understanding and treatment of mental illness through exploratory and developmental research. Applications for Exploratory/Developmental Research Grant awards should include projects distinct from those supported through the traditional R01 activity code. For example, long-term projects, or projects designed to increase knowledge in a well-established area, are not appropriate for this FOA. Applications submitted to this FOA should be exploratory and novel. These studies should break new ground or extend previous discoveries toward new directions or applications. Projects of limited cost or scope that use widely accepted approaches and methods within well-established fields are better suited for the [NIH Small Research Grant Program](#).

NIMH accepts R21 applications through the following FOAs:

- [PA-21-235](#), NIMH Exploratory/Developmental Research Grant (Parent R21 Clinical Trial Not Allowed)
- [PA-20-194](#), NIH Exploratory/Developmental Research Grant Program (Parent R21 Clinical Trial Required) for [mechanistic studies](#)
- [PA-20-196](#), NIH Exploratory/Developmental Research Grant Program (Parent R21 Basic Experimental Studies with Humans Required)
- [PA-21-219](#), Joint NINDS/NIMH Exploratory Neuroscience Research Grant (R21 Clinical Trial Optional)

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

**Letter of Intent:** Not Applicable

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

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:** Susan Koester, Ph.D.; National Institute of Mental Health (NIMH); Telephone: (301) 443-3563  
Email: [koesters@mail.nih.gov](mailto:koesters@mail.nih.gov)

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

**Grant Program: DOD Hearing Restoration Focused Research Award**

**Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-21-HRRP-FRA**

**RFP Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333693>

**Brief Description:** It is estimated that more than 30 million Americans over the age of 12 have hearing loss in both ears and an estimated 48 million have hearing loss in at least one ear. The most recent data from the Department of Veterans Affairs (VA) indicates that there are more than 1.3 million Veterans with Service-connected disability due to hearing loss. While hearing loss has profound impact on quality of life, there is no drug approved by the U.S. Food and Drug Administration (FDA) for hearing restoration. Despite significant advances in the understanding of hearing loss in animal models, the development of hearing restoration therapeutics has been hindered by difficulties in validation and translation, and by limitations in precision diagnostic capability. The HRRP aims to advance the science of hearing restoration by funding groundbreaking research that removes barriers in translation and/or diagnosis.

To meet the intent of the award mechanism, all applications to the FY21 HRRP FRA must address research in one or more of the following Focus Areas:

- Accelerate translation of biological regeneration/repair mechanisms into therapies that treat auditory system injury and restore auditory function. For example, but not limited to:
  - Hair cell regeneration/repair/recovery
  - Neural regeneration/repair/recovery
  - Treatment for synaptopathy and hidden hearing loss
- Diagnostic tests that help differentiate sensory, neural, synaptic, and central processing disorders, that may inform applicability and outcomes for current or future hearing restoration therapeutics. Develop reliable in-vitro human models to facilitate the understanding, derivation, and characterization of human auditory cells, and/or to facilitate the evaluation of hearing restoration therapies.
- Develop and/or validate techniques/methods beyond the audiogram to diagnose acute auditory system injury in austere or remote environments. For example, but not limited to, simple and rapid assessments that are compatible with portable platforms.

**Awards:** Funding Level 1 supports exploratory, high-risk/high-reward research that is in the earliest stages of idea development. Funding Level 2 supports the advancement of more mature research toward clinical translation. Available funding: \$8,800,000

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

**Proposal Submission Deadline:** Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 28, 2021 • Invitation to Submit an Application: September 2021 • Application Submission Deadline: 11:59 p.m. ET, November 30, 2021

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

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**Grant Program: Counterterrorism and Forensic Science Research: Visiting Scientist Program**

**Agency: FBI FBI-CFSRU-2021**

**Website:** <https://orise.orau.gov/fbi/>

**Brief Description:** The U.S. Federal Bureau of Investigation (FBI) Counterterrorism and Forensic Science Research Unit's (CFSRU) provides technical leadership for the FBI as well as for other law enforcement and intelligence agencies through applied research and development.

**What will I be doing?** As a participant with the Counterterrorism and Forensic Science Research Unit's (CFSRU) Visiting Scientist Program (VSP), you will have an opportunity to enhance your professional development and increase your research capabilities and contributions by participating in forensic research initiatives utilizing state-of-the-art equipment under the mentorship of CFSRU scientists. The VSP will expose you to a research environment in a high security government facility and provides an opportunity to perform research in areas of interest unique to law enforcement and national security.

You may be involved in research including:

- Human identification
- Detection of Bio-threat agents

- Detection of explosives and drugs
- Characterization and comparison of forensic materials
- Elemental analysis of trace evidence
- Mass spectrometry applications to chemical and biological analyses, including IRMS
- Development of instrumental methods
- Evaluation of field portable instrumentation
- Advancement of forensic chemistry, specifically in toxicology, and trace volatiles
- Advancement of techniques for Imaging and Visualization

Under the guidance of a mentor, you may be involved in some or all of the following:

- Conducting searches of scientific literature
- Designing experimental plans
- Conducting field tests
- Performing analytical laboratory analyses
- Analyzing instrumental data/ documenting results
- Preparing and presenting research findings to diverse audiences, both orally and in writing

**Why should I apply?** Under the guidance of a mentor you will perform sophisticated laboratory techniques using emerging technologies, judge the completeness and accuracy of research results, perform statistical analyses on data, and prepare written manuscripts for FBI review and publication in peer-reviewed journals.

Release of any information acquired during participation in this program is at the sole discretion of the FBI.

**Where will I be located?** Quantico, Virginia

**Apply Today!** <https://www.zintellect.com/Opportunity/Details/FBI-CFSRU-2021>

Participation Eligibility:

You must meet the following criteria to participate in the program:

- Be a U.S. Citizen.
- Have completed requirements for a Bachelor's, Master, or PhD or complete all the requirements for the degree by the anticipated start date of the appointment.
- Undergo an extensive FBI background investigation and meet suitability criteria.

**Award:** As a participant you will receive a stipend as support for your living and other expenses during this appointment. Stipend rates are determined by the CFSRU officials and are based on your academic and professional background. Relocation expenses, not to exceed \$1,000, incurred in relocating from your current address to Quantico, Virginia (if more than 50 miles from the address shown on the application), may be reimbursed for Post-Doctoral appointments. You will receive a travel allowance of \$5,000 per appointment year to cover travel-related expenses to scientific and professional development activities. The initial appointment can be for the summer or for one year, but may be renewed upon recommendation of FBI contingent on the availability of funds. The appointment can be made on a full-time or part-time basis.

**Deadline:** Applications will be reviewed on a rolling-basis.

**Contact Information:** Email [FBIrpp@orau.org](mailto:FBIrpp@orau.org). Please list the reference code [FBI-CFSRU-2021] for this opportunity in the subject line of your email.

**Grant Program: DOD Vision, Translational Research Award**

**Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-21-VRP-TRA**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333537>

**Companion Opportunity: DOD Vision, Investigator- Initiated Research Award**

W81XWH-21-VRP-IIRA <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333545>

**Brief Description:** The goal of the VRP is to transform visual system trauma care for our Armed Forces and the Nation. Eye injury and visual dysfunction resulting from battlefield trauma affect a large number of Service Members and Veterans. Surveillance data from the Department of Defense (DOD) showed more than 275,000 eye injuries in the U.S. armed services between 2000 and 2017. More than 6,000 of the injuries were categorized as high risk of blindness. In addition, statistics from the Defense and Veterans Brain Injury Center show that through the third quarter of 2020, more than 430,000 Service Members have been diagnosed with traumatic brain injury (TBI), which can have significant impact on vision even when there is no injury to the eye. In a study sponsored by the Department of Veterans Affairs (VA), as many as 75% of Service Members who suffered a TBI self-reported visual dysfunction, with some patients suffering vision loss and functional blindness<sup>1</sup>. The FY21 VRP challenges the scientific community to design innovative research that will significantly advance the understanding, prevention, diagnosis, mitigation, and/or treatment of eye injury or visual dysfunction associated with military-relevant trauma. Research outcomes are expected to ultimately improve the care of Service Members and Veterans as well as the American public.

**Awards:** Multiple awards; Estimated Total Program Funding: \$20,000,000

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

**Proposal Deadline:** Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 21, 2021 • Invitation to Submit an Application: September Day, 2021 • Application Submission Deadline: 11:59 p.m. ET, November 16, 2021

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

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**Grant Program: ONR Global Research Opportunity: Global-X Challenge**

**Agency: Department of Defense Office of Naval Research N00014-21-S-SN10**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333307>

**Brief Description:** This notice announces the 2021 ONR Global-X Challenge and describes new funding to be awarded under the authority of N00014-21-S-B001, Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology which can be found at the following link: <https://www.onr.navy.mil/work-with-us/funding-opportunities/announcements>.

ONR Global expects to have up to a total of \$500,000 available for the initial nine-month period of performance for grants awarded under the 2021 Global-X Challenge. Additional funding may be possible for an additional nine month optional research effort, following successful concept demonstration. Total grant award values, including the initial and additional optional research period, will not exceed \$1,000,000. ONR Global may award one grant or multiple grants, addressing a single challenge area or multiple grants addressing each of the three challenge areas described in this special notice below. The number of grants and amounts of funding for each grant will depend on proposals submitted. ONR Global expects successfully demonstrated concepts will attract additional funding from other sources for potential follow-on accelerated research efforts under a separate agile acquisition mechanism; however, this does not imply the promise of additional funding. The purpose of this announcement is to focus the attention of the international scientific community on (1) the challenge areas of interest; (2) a Global-X Challenge Kick-off Webinar on 29 April 2021 at 0700 hours EDT; and (3) the planned timetable for the submission of white papers and full proposals.

**Awards:** Multiple awards.

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

**Proposal Deadline:** White Paper Submission Date 28 May 2021 23:59 Eastern Daylight Time (EDT)  
Notification of White Paper Valuation\* 11 June 2021 Full Proposal Submission 9 July 2021

**Contact Information:** Dr. Charles Eddy, ONR Global Science Director, [charles.r.eddy12.civ@mail.mil](mailto:charles.r.eddy12.civ@mail.mil)

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**Grant Program: Minerva Research Initiative****Agency: Department of Defense WHS-AD-FOA-21-01****Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333371>

**Brief Description:** The Office of the Secretary of Defense (OSD) is interested in receiving proposals for the Minerva Research Initiative (<http://minerva.defense.gov>), a university-led defense social science program seeking fundamental understanding of the social and cultural forces shaping U.S. strategic interests globally. OSD is particularly interested in projects that align with and support the National Defense Strategy, found at: <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>

The Minerva Research Initiative (Minerva) emphasizes questions of strategic importance to U.S. national security policy. It seeks to increase the Department's intellectual capital in the social sciences and improve its ability to address future challenges and build bridges between the Department and the social science community. Minerva brings together universities and other research institutions around the world and supports multidisciplinary and cross-institutional projects addressing specific interest areas determined by the Department of Defense. The Minerva program aims to promote research in specific areas of social science and to promote a candid and constructive relationship between DoD and the social science academic community.

The Minerva Research Initiative competition is for research related to nine (9) topics listed below. Innovative white papers and proposals related to these research areas are highly encouraged. Detailed descriptions of the interest areas—which are intended to provide a frame of reference and are not meant to be restrictive—can be found in Section IX, “Minerva Topics.” Topic 1: Social Implications of Environmental Change Topic 2: Resource Competition, Social Cohesion, and Strategic Climate Resilience Topic 3: Security Risks in Ungoverned, Semi-Governed, and Differently-Governed Spaces Topic 4: Analysis of Foreign Influence Operations in Cross-Cultural Perspective Topic 5: Community Studies on Online and Offline Influence Topic 6: Computational Social Science Research on Difficult-to-Access Environments Topic 7: Social and Cultural Implications of Artificial Intelligence Topic 8: Humans and Outer Space Topic 9: Management and Information in the Defense Environment

**Awards:** Multiple awards; Estimated Total Program Funding: \$15,000,000

**Letter of Intent:** White paper due on June 23, 2021 3:00 PM ET

**Proposal Deadline:** September 29, 2021 3:00 PM ET

**Contact Information:** Christina L Gess Grantor Phone 703-545-1880 [Contract Specialist WHSAD](#)

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**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.afosr.org/wg/afosr/w/researchareas/12792/young-investigator-program-yip/>

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

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

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

**Proposal Deadline:**

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

**Contact Information:** Ellen M. Robinson, AFOSR; Email: [afosryip@us.af.mil](mailto:afosryip@us.af.mil)

**Grant Program: 2021 ERDC Broad Agency Announcement**

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

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

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

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

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

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

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

**Contact Information:** For contractual questions concerning proposals to CHL, EL, GRL, GSL, ITL, and UROC contact the following: [ERDC-BAA@usace.army.mil](mailto:ERDC-BAA@usace.army.mil) and Reginald J. Bryant at 601-634-7166 or [Reginald.J.Bryant@usace.army.mil](mailto:Reginald.J.Bryant@usace.army.mil) or Anitra Wilson at [Anitra.D.Wilson@usace.army.mil](mailto:Anitra.D.Wilson@usace.army.mil).

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## [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.

**Contact Information:** Ewa Flom, [ewa.flom@dot.gov](mailto:ewa.flom@dot.gov), 202-924-1125

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## [Department of Agriculture:](#)

### **Grant Program: NRCS’s Conservation Innovation Grants (CIG) Classic Program for Federal fiscal year (FY) 2021**

**Agency: Department of Agriculture USDA-NRCS-NHQ-CIG-21-NOFO0001113**

**Website:**

<https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/financial/cig/?cid=stelprdb1046235>

[https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/cig/?cid=nrcs143\\_008205](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/cig/?cid=nrcs143_008205)

**Brief Description:** NRCS is announcing the availability of up to \$15 million in Conservation Innovation Grants (CIG) funding to stimulate the development and adoption of innovative conservation approaches and technologies in conjunction with agricultural production. CIG projects are expected to lead to the transfer of conservation technologies, management systems, and innovative approaches (such as market-based systems) to agricultural producers, into technical manuals and guides, or to the private sector. Projects may be between 1 and 3 years in duration.

A webinar for CIG Classic applicants is scheduled for June 8, 2021 at 3 p.m. Eastern Time. Information on how to participate in the webinar will be posted to the [CIG Applicant website](#). Applicants are encouraged to visit the CIG website to learn more about the CIG program. Questions about this announcement can be directed to: [nrcscig@usda.gov](mailto:nrcscig@usda.gov). A “Frequently Asked Question” document based on questions submitted during the webinar or submitted to the Federal awarding agency contact will be posted on Grants.gov at least 2 weeks before the proposal due date.

**Awards:** Up to \$2,000,000; Anticipated Available Funding: \$15,000,000.

**Proposal Deadline:** Applications must be submitted through the NRCS Programs Portal, a new system for CIG application submission, by 11:59 p.m. Eastern Time on July 19, 2021.

**Contact Information:** Potential applicants may contact NRCS with questions by emailing [nrcscig@usda.gov](mailto:nrcscig@usda.gov)

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

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

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

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

**Letter of Intent:** Required.

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

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

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

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## [Department of Labor](#)

**Grant Program: 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](mailto:Carls.Matthew.L@dol.gov)

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## **Department of Commerce/EDA**

### **Grant Program: Oceanic and Atmospheric Research (OAR)**

**Agency: Department of Commerce National Oceanic and Atmospheric Administration NOAA-OAR-OER-2022-2006910**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333585>

**Brief Description:** The NOAA Office of Ocean Exploration and Research (OER), also known as NOAA Ocean Exploration, is soliciting proposals to conduct or support ocean exploration resulting in outcomes that provide or enable initial assessments about unknown or poorly understood regions of U.S. waters. This funding opportunity will focus on the outcomes of the Workshop to Identify National Ocean Exploration Priorities in the Pacific hosted by the Consortium for Ocean Leadership (COL) in 2020 in partnership with OER. Proposals should support the ocean exploration topical priorities or spatial priorities in the U.S. Exclusive Economic Zone (EEZ) identified in the “Report on the Workshop to Identify National Ocean Exploration Priorities in the Pacific” ([https://oceanleadership.org/wpcontent/uploads/2020/11/OceanExploration\\_PacificPriorities\\_Workshop\\_Report\\_NOV2020.pdf](https://oceanleadership.org/wpcontent/uploads/2020/11/OceanExploration_PacificPriorities_Workshop_Report_NOV2020.pdf)).

Proposals should also support the National Strategy for Mapping, Exploring, and Characterizing the United States Exclusive Economic Zone (national strategy, <https://oeab.noaa.gov/wpcontent/uploads/2021/01/2020-national-strategy.pdf>). Proposals for the ocean exploration and marine archaeology themes must be for projects in unknown or poorly understood areas as referenced in the national strategy’s implementation plan (<https://oeab.noaa.gov/wpcontent/uploads/2021/01/2021-national-strategy-implementation.pdf>) and within the U.S. EEZ in the Pacific Ocean.

**Awards:** Project funding up to \$750,000. Anticipated available funding: \$3,000,000

**Letter of Intent:** Pre-proposal stage (due June 21, 2021): 1. OER NOFO cover sheet 2. Pre-proposal, max 2 pages Submit to: [oer.ffo2022@noaa.gov](mailto:oer.ffo2022@noaa.gov)

**Proposal Deadline:** Full Proposal due on October 8, 2021

**Contact Information:** For further information and for applicants without internet, contact the NOAA Office of Ocean Exploration and Research at (301) 734-1172 or [oer.ffo2022@noaa.gov](mailto:oer.ffo2022@noaa.gov)

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### **Grant Program: EDA University Center Competition - CRO**

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

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

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

The purpose of EDA’s University Center program is to enable institutions of higher education and consortia of institutions of higher education to establish and operate University Centers (UCs) specifically focused on leveraging university assets to build regional economic ecosystems that support innovation and high-growth entrepreneurship, resiliency and inclusiveness. By responding to the economic development needs of their regions, University Center programs are demand-driven by nature.

Historically, UCs have been leaders in promoting and facilitating economic development in their regions. They have been among the first to recognize emerging technical assistance needs. As early as FY 1980, EDA-funded UCs responded to the needs of small- and medium-sized manufacturers and processors for technology transfer and commercialization assistance. More recently, some UCs have been providing resources and guidance on how to create a digitally inclusive economy while others are working with stakeholders in their regions to address economic impacts from the closure of major plants.

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

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

**Proposal Deadline:** June 4, 2021

**Contact Information:** [www.eda.gov/contact](http://www.eda.gov/contact)

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

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

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

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

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

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

**Proposal Deadline:** September 30, 2023.

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

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**[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](mailto:chung.serena@epa.gov)

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## [Department of Energy](#)

### **Grant Program: Quantum Horizons: QIS Research and Innovation for Nuclear Science**

**Agency: Department of Energy - Office of Science DE-FOA-0002514**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333320>

**Brief Description:** The DOE SC program in Nuclear Physics (NP) hereby announces its interest in receiving interdisciplinary applications for open scientific research on Quantum Computing (QC) and Quantum Information Science and Technology (QIST) with a clear line of sight to enable discoveries to explore and understand all forms of nuclear matter, including some that no longer exist. From the hot dense soup of quarks and gluons in the first microseconds after the Big Bang, through the formation of protons and neutrons beginning the evolution of the chemical elements, to the awesome power of supernovae, the physics of nuclei is fundamental to our understanding of the universe.

*Quantum Horizons: QIS Research and Innovation for Nuclear Science* is a new initiative to identify, prioritize, and coordinate emerging opportunities in both fundamental research and use-inspired challenges at the interface of NP and QIST. NP's Quantum Horizons program emphasizes the science-first approach and is informed by the results of NP community research workshops "Opportunities for Nuclear Physics & Quantum Information Science" [3] and "Quantum Computing for Theoretical Nuclear Physics" [4] and the "National Strategic Overview for Quantum Information Science" [5], the Interagency Working Group on Quantum Information Science [6] and the Nuclear Physics and Quantum Information Science report by the Nuclear Science Advisory Committee (NSAC).

**Awards:** It is anticipated that approximately \$10,000,000 may be available over the entire period for all awards made under this FOA, subject to availability of funds. Within this amount, up to \$5,000,000 may be available in FY 2021 to support awards under this FOA.

**Letter of Intent:** Submission Deadline for Letters of Intent: May 21, 2021, at 5:00 PM Eastern Time A Letter of Intent is encouraged Letter of Intent Response Date May 26, 2021, at 5:00 PM Eastern Time

**Submission Deadline:** Submission Deadline for Applications: June 18, 2021, at 5:00 PM Eastern Time

**Contact:** Dr. Gulshan Rai Program Manager 301-903-4702; [gulshan.rai@science.doe.gov](mailto:gulshan.rai@science.doe.gov)

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### **Grant Program: Assisting Federal Facilities with Energy Conservation Technologies (AFFECT)**

**Agency: Department of Energy Golden Field Office DE-FOA-0002472**

**Website:** <https://eere-exchange.energy.gov/Default.aspx#FoaIda431a2fd-4bd8-49ab-9fe4-2d0a244c4090>

**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.

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

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## [NASA](#)

### **Grant Program: ROSES 2021: Heliophysics Innovation in Technology and Science**

**Agency:** NASA NNH21ZDA001N-HITS

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B1964FA9E-5648-A6F2-B0BE-35BF0DEF580D%7D&path=&method=init>

**Brief Description:** This Heliophysics Innovation in Technology and Science (HITS) Program element solicits proposals that advance the goals and objectives of NASA Heliophysics by conducting outstanding, innovative or expeditious research that can be accomplished in one year. HITS is a component of the Heliophysics Research Program and proposers interested in this program element should read B.1, the Heliophysics Research Program Overview for Heliophysics-specific requirements. Common requirements for all ROSES elements and proposals are found in the ROSES Summary of Solicitation and the Proposer's Guidebook and the order of precedence for proposers is the following: ROSES Element B.19 (this document) takes precedence followed by B.1, The Heliophysics Research Program Overview, followed by the ROSES-2021 Summary of Solicitation and, finally, the NASA 2021 Proposer's Guidebook. Proposers should be familiar with all of these resources.

**Awards:** Multiple awards

**Notice of Intent:** Contact program director

**Proposal Deadline:** March 29, 2022

**Contact:** Lika Guhathakurta Heliophysics Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: (202) 358-1992 Email: [madhulika.guhathakurta@nasa.gov](mailto:madhulika.guhathakurta@nasa.gov)

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

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

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BC6DCCA8A-494B-FBE5-8503-8A969034C818%7D&path=&method=init>

**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](mailto: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>

**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](mailto:p.ghuman@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?solId=%7BDD29C108-980F-6F1A-AEC7-CE7375E35007%7D&path=&method=init>

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

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

**Awards:** TBD

**Notice of Intent:** Please see below

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

**Contact:** Simon Plunkett Telephone: (202) 358-2034 Email: [simon.p.plunkett@nasa.gov](mailto:simon.p.plunkett@nasa.gov)

Jeff Morrill Telephone: (202) 358-3744 Email: [jeff.s.morrill@nasa.gov](mailto: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

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

**Brief Description:** The New (Early Career) Investigator Program in Earth science is designed to support outstanding scientific research and career development of scientists and engineers at the early stage of their professional careers. The program welcomes innovative research initiatives and seeks to cultivate diverse scientific leadership in Earth system science. The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research. Proposals with objectives connected to needs identified in most recent Decadal Survey Thriving on our Changing Planet: A Decadal Strategy for Earth Observation from Space

are welcomed. The program supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (See the Science Plan at <http://science.nasa.gov/about-us/science-strategy/>). In research and analysis, the focus areas are: • Carbon Cycle and Ecosystems, • Climate Variability and Change, • Water and Energy Cycle, • Atmospheric Composition, • Weather, and • Earth Surface and Interior

**Awards:** TBD

**Notice of Intent:** Please see below

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

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

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### **National Endowment of Humanities**

#### **Grant Program: Fellowship Programs at Independent Research Institutions**

**Agency:** National Endowment for the Humanities 20210811-RA

**Website:** <https://www.neh.gov/grants/research/fellowship-programs-independent-research-institutions>

**Brief Description:** The Fellowship Programs at Independent Research Institutions (FPIRI) program supports institutions that provide fellowships for advanced humanities research in the U.S. and abroad, foster communities of intellectual exchange among participating scholars, and provide access to resources that might otherwise not be available to the participating scholars.

Fellowship programs may be administered by independent centers for advanced study, libraries, and museums in the U.S.; American overseas research centers; and American organizations that have expertise in promoting humanities research in foreign countries. Individual scholars apply directly to the institutions for fellowships. In evaluating applications, consideration is given to the library holdings, archives, special collections, and other resources—either on site or nearby—that institutions make available to fellows.

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

**Award:** Maximum award amount: Up to \$565,000 (\$385,000 in outright funds plus \$180,000 in Federal Matching Funds)

**Letter of Intent:** Optional Draft due June 30, 2021

**Proposal Deadline:** Application due August 11, 2021

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

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#### **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](mailto:publicpgms@neh.gov)

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## [Private Foundations](#)

### **Special Funding Program: Israel-US Fund Seeking Proposals for Clean-Energy Joint Research**

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

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

**Website:** <https://www.birdf.com/bird-energy-call-proposals/>

**Brief Description:** 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](#) 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. 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

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

**Letter of Intent:** Executive Summary: June 30, 2021

**Proposal Deadline:** Final Proposal: August 13, 2021

**Contact:** Submission Information: <http://www.birdf.com/upload-system/>

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### **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>

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### **[Proposal Submission and Streamlyne Information](#)** **[Internal Timeline for Successful and Timely Proposal Submission](#)**

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

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

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