

NJIT Research Newsletter

Issue: ORN-2021-22

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 NSF Funding Opportunity: Internal Review

Grant Program: National Science Foundation Research Traineeship (NRT) Program

Agency: National Science Foundation NSF 21-536

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21536/nsf21536.htm>

Brief Description: The NSF Research Traineeship (NRT) program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. The program is dedicated to effective training of STEM graduate students in high priority interdisciplinary or convergent research areas, through a comprehensive traineeship model that is innovative, evidence-based, and aligned with

changing workforce and research needs. Proposals are requested that address any interdisciplinary or convergent research theme of national priority, as noted above.

The NRT program addresses workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. The program encourages proposals that involve strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners. NRT especially welcomes proposals that include partnership with NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) and leverage INCLUDES project efforts to develop STEM talent from all sectors and groups in our society (https://www.nsf.gov/news/special_reports/big_ideas/includes.jsp). Collaborations between NRT proposals and existing NSF INCLUDES projects should strengthen both NRT and INCLUDES projects.

Awards: Standard Grant; Anticipated Funding Amount: \$55,000,000

NRT Track 1 Awards (14-16 awards each year) are expected to be up to five (5) years in duration with a total budget up to \$3,000,000.

NRT Track 2 Awards (4-6 awards each year) are expected to be up to five (5) years in duration with a total budget up to \$2,000,000.

Limit on Number of Proposals per Organization: 2

An eligible organization may participate in only two (2) proposals per NRT competition as lead or collaborative non-lead. All Track 1 and/or Track 2 NRT proposals will be counted toward this total limit of two proposals per organization.

Participation includes serving as a lead organization or non-lead organization on any proposal.

Organizations participating only as evaluators on projects are excluded from this limitation. Proposals that exceed the organizational eligibility limit will be returned without review regardless of whether the organization on such a proposal serves as lead or non-lead collaborative organization. Only US IHEs are eligible to submit as a lead or non-lead organization. Potential PIs are advised to contact their institutional office of research regarding processes used to select proposals for submission.

Internal Review and Selection on Limit on Institutional Proposals: If planning to submit a proposal, please submit an internal Letter of Intent with the following sections to your respective deans by June 25, 2021. Deans should forward their recommendations to the Office Research (at dhawan@njit.edu) by July 2, 2021 for institutional review. The institutional decision will be provided by July 9, 2021. Sections of the internal Letter of Intent (no more than 5 pages) should include:

1. Title, PI and Co-PIs with department affiliations; date of submission
2. Project Description (Summary)
3. Intellectual Merit
4. Broader Impact
5. Key Investigators
6. Budget Summary
7. institutional and Other Resources Needed

Letters of Intent: Not required

Proposal Submission Deadline: September 06, 2021

Contacts: Daniel Denecke, telephone: (703) 292-8072, email: ddenecke@nsf.gov

- Vinod K. Lohani, telephone: (703) 292-2330, email: vlohani@nsf.gov
- John Weishampel, telephone: (703) 292-2162, email: jweisham@nsf.gov

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[Grant Opportunity Alerts](#)

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII); Predictive Intelligence for Pandemic Prevention Phase I: Development Grants (PIPP Phase I); Division of Chemistry: Disciplinary Research Programs (CHE-DRP); EHR Core Research; Centers for Chemical Innovation (CCI)

NIH: NIH Blueprint MedTech Pilot Award to Accelerate Early-Stage Neurotechnologies; NIH Director's Transformative Research Awards (R01); Mentored Career Development Award to Promote Faculty Diversity in Biomedical Research (K01); 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)

Department of Defense/US Army/DARPA/ONR: C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research, Idea Development Award; DOD Hearing Restoration Focused Research Award; Counterterrorism and Forensic Science Research: Visiting Scientist Program; DOD Vision, Translational Research Award

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: NIST Public Safety Innovation Accelerator Program – Artificial Intelligence for IoT Information Prize Competition; Oceanic and Atmospheric Research (OAR); FY2021 to FY2023 NOAA Broad Agency Announcement (BAA)

EPA: Improving Community Health through Microbial Source Tracking

Department of Energy: Quantum Horizons: QIS Research and Innovation for Nuclear Science; Assisting Federal Facilities with Energy Conservation Technologies (AFFECT)

NASA: NASA Innovative Advanced Concepts (NIAC) Phase I; Early Stage Innovations (ESI); ROSES 2021: Instrument Incubator Program; ROSES 2021: Living With a Star Science

National Endowment of Humanities: Fellowship Programs at Independent Research Institutions

Private Foundations: Special Funding Program: Israel-US Fund 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: Gennady Gor (PI) and Alexei Khalizov (Co-PI)

Department: Chemical and Material Engineering

Grant/Contract Project Title: EAGER: Compressibility of Nanopore-Confined Liquids Probed by Ultrasonic Experiments

Funding Agency: NSF

Duration: 09/01/21-08/31/23

PI: Lou Kondic (PI)

Department: Mathematical Sciences

Grant/Contract Project Title: Stick-Slip Dynamics and Failure in Granular Materials

Funding Agency: U.S. Army (Army Research Office)

Duration: 07/15/18-12/14/21

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[In the News...](#)

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

Biden’s Pentagon Budget Request Focuses on R&D, Forward-Leaning Investments: President Joe Biden is requesting nearly \$112 billion research, development, testing and evaluation for the Defense Department—which it is calling the largest-ever RDT&E investment—in a budget officials say is biased toward building capabilities for the future at the expense of legacy platforms.

Ever since Biden [sent his skinny budget for fiscal year 2022 to Congress in April](#), lawmakers—Republicans, in particular—have raised concerns over whether the essentially flat \$715 billion Pentagon topline number is adequate and complained that the late budget is delaying the National Defense Authorization Act process. In [documents released Friday](#), the administration revealed a budget aimed at eliminating legacy programs in order to drive forward-looking investments in technologies like artificial intelligence, 5G and microelectronics.

“Critically, we reallocate resources to fund research and development in advanced technologies such as microelectronics,” Deputy Secretary of Defense Kathleen Hicks said during a press briefing Friday. “This will provide the foundation for fielding a full range of needed capabilities, such as hypersonics, artificial intelligence and 5G.”

While responsibility for constructing the budget ultimately falls on Congress, Biden’s request tells a story of an administration focused on modernizing the Defense Department as China continues to fund investments in advanced technologies. Some of the key topline numbers unveiled Friday include:

- \$112 billion for RDT&E, nearly \$5 billion more than the 2021 enacted level.
- \$14.7 billion for science and technology.
- \$2.3 billion for microelectronics.
- \$874 million for artificial intelligence.
- \$398 million for 5G.
- \$1.8 billion for the Global Positioning System Enterprise.
- \$10.4 billion for cyberspace activities.

More information is posted on the [NextGov website](#).

The United States Innovation and Competition Act: Background: The United States Innovation and Competition Act is comprised of bills reported out of the committees on Commerce, Science, and Transportation; Foreign Relations; Homeland Security and Governmental Affairs; Banking, Housing, and Urban Affairs; Health, Education, Labor, and Pensions; and the Judiciary. It is intended to help address the rising military, geopolitical, and economic competition from China. Notable bills in the package include versions of the Endless Frontier [Act](#), the Strategic Competition [Act](#), and the Meeting the China Challenge [Act](#) of 2021.

Floor Situation: The Senate [voted](#) 86-11 in favor of the motion to invoke cloture on the motion to proceed to S.1260, the Endless Frontier Act. Majority Leader Schumer filed the [text](#) of the United States

Innovation and Competition Act as an amendment in the nature of a substitute for the EFA. The Senate is expected to consider the legislation over the next two weeks.

Executive Summary: The USICA establishes a Directorate of Technology and Innovation at the National Science Foundation. It authorizes \$81 billion for NSF, including \$29 billion over five years for the new directorate. It directs the Department of Commerce to designate regional technology hubs across the country, and authorizes \$10 billion over five years for these hubs. The bill appropriates \$52.7 billion for incentivizing domestic semiconductor fabrication and \$1.5 billion for 5G innovation. It takes steps to counter the Chinese Communist Party by addressing China's political influence in universities, countering predatory economic practices like IP theft, and expanding and strengthening our alliances. The bill requires sanctions against foreign entities or people that the president identifies each year as having supported or engaged in cyberattacks or otherwise undermined U.S. cybersecurity on China's behalf. The S.1260 Act is posted on the website https://www.rpc.senate.gov/legislative-notice/s1260_the-united-states-innovation-and-competition-act.

President Biden's Fiscal Year 2022 Budget Proposal: President FY2022 as presented includes (this report is provided by WSW):

U.S. Department of Health and Human Services:

Topline: \$131.8 billion in discretionary funding, a \$25 billion or 23.5% increase from the FY21 level, and \$1.5 trillion in mandatory funding.

Office of the National Coordinator for Health Information Technology (ONC):\$86.6 million

National Institutes of Health: \$50.5 billion, a \$9 billion increase over FY21

- **New Advanced Research Projects Agency for Health (ARPA-H):** \$6.5 billion to establish ARPA-H, a bold new entity within NIH that will speed transformational innovation in health research with an initial focus on cancer, diabetes and Alzheimer's.
 - ARPA-H will make pivotal investments to drive transformational innovation in health research and speed application and implementation of health breakthroughs to reduce illness and save lives. ARPA-H will strive to collapse barriers and accelerate the development of evidence based, real-world-driven cures for and transformative advances in a range of biomedical and health research areas and diseases – from cancer to hypertension to population-level behavioral interventions. ARPA-H will promote a culture that values a relentless drive for transformative technical results and a willingness to take risks and be nimble – one that is built on teamwork, broad and active engagement, a collaborative spirit across disciplines, a sense of urgency, and constantly pushing towards a common set of goals. ARPA-H will fund projects with the potential to transform entire areas of medicine and health by:
 - Tackling bold challenges requiring large scale, sustained coordination
 - Creating new capabilities (e.g., technologies, data resources, disease models)
 - Supporting high-risk exploration that could establish entirely new paradigms
 - Overcoming market failures through critical solutions, including financial incentives.
 - ARPA-H will boost progress towards treatments and cures by working with industry, academia, nonprofits, and other Federal agencies, using traditional and nontraditional mechanisms like Other Transaction Authority, to scale up projects with the most promise for improving health and saving lives. A federal advisory panel will be established to provide an avenue for interagency coordination and idea generation. ARPA-H will have a distinctive culture and organizational structure, and will complement NIH's existing

research portfolio, providing an agile and flexible arm to advance biomedical science quickly and robustly.

U.S. Department of Commerce:

Topline: \$11.5 billion, a \$2.6 billion or 29% increase from the FY21

Economic Development Administration: \$433.11 million, a \$87.11 million or 25% increase over the FY21 enacted level

- Build to Scale: \$45 million, a \$7 million increase over the FY21 enacted level. These additional funds will help EDA reach new geographies and industries, or geographies and industries that have historically been underinvested in by this program. EDA plans to allocate \$35- \$36 million to the Venture Challenge and \$2-\$3 million to the Industry Challenge, pending the availability of funding from a partner agency for the Industry Challenge. Additionally, \$7 million will be allocated for the Capital Challenge.
- Public Works Program: \$124 million, an increase of \$4.5 million over the FY21 enacted level
- Economic Adjustment Assistance: \$48 million, an increase of \$10.5 million over the FY21 enacted level
- STEM Apprenticeship Pilot Program: \$10 million, \$8 million over the FY21 enacted level

National Oceanic and Atmospheric Administration: \$7 billion, a \$1.5 billion or 28% increase over the FY21 enacted level

- Coastal Resilience: \$800 million to expand investments in climate research, including competitive grants to build coastal resilience to help reduce the costly economic and environmental impacts of severe weather events on communities.

National Institute of Standards and Technology: \$1.5 billion, a \$463 million or 45% increase over the FY21 enacted level

- Scientific and Technical Research and Services: \$916 million, an increase of \$128 million the over FY21 enacted level
- Manufacturing Innovation Institutes as part of the National Network for Manufacturing Innovation: \$150 million to fully fund two new Manufacturing Innovation Institutes

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 support the foundational research that will bring us the next generation of energy discoveries.

- The budget request prioritizes investments in climate science and fundamental energy research, including a nearly 10% increase in funding for climate and clean energy focused research. These investments coupled with investments in applied energy programs would leverage the tremendous innovation capacity of the National Laboratories, universities, and entrepreneurs to transform America's power, transportation, buildings, and industrial sectors to achieve a net-zero emissions economy by 2050.
- Build on and advance the Department's global leadership in critical technology areas such as quantum science, advanced supercomputing, and artificial intelligence.
- With an 'all R&D community' approach, **the new Energy Earthshots initiative** will drive integrated program development across DOE's science and applied energy offices and ARPA-E to advance carbon-neutral fuels such as hydrogen, new grid modernization technologies, and revolutionize carbon management.

- **New ARPA-Climate** will be critical to advancing climate technology solutions for adaptation, resilience and non-energy emissions mitigation.

Office of Energy Efficiency and Renewable Energy (EERE): \$4.7 billion a 65% increase from FY21, includes more than \$1 billion in new funding to deploy the clean energy technologies that can deliver pollution-free, affordable energy to all Americans while creating jobs and building a more equitable economy.

- Two new Manufacturing USA institutes to ensure that American workers lead the globe in building clean energy technology
- \$300 million for grants to partner with state and local governments advancing clean energy policies suited to their needs, prioritizing clean energy and benefits for disadvantaged communities
- \$400 million to create jobs renovating homes to save energy and reduce energy bills for low-income Americans
- \$400 million to create well-paying union jobs decarbonizing Federal buildings.

New Office of Clean Energy Demonstrations: \$400 million to keep bringing innovative technologies to market.

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 (TIP): 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.

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.

Artificial Intelligence: \$734.41 million. In FY22, NSF will increase support for foundational research in AI, including machine learning and deep learning, natural language technologies, knowledge representation and reasoning, robotics, and computer vision, along with the fairness, accountability, transparency, explainability, safety, security, and robustness across all areas of AI. NSF will also support use-inspired research, education and workforce development, and access to data and advanced computing research infrastructure that collectively enhance AI. In FY22, NSF will continue support (\$69.11 million) for the National AI Research Institutes program. In addition, NSF will emphasize AI research, education and workforce development, and infrastructure activities at MSIs. Specifically, NSF will broaden participation by intentionally focusing on the development of AI research capacity at MSIs, the involvement of populations long underrepresented in AI in research activities, and the formation of partnerships spanning multiple MSIs as well as MSIs and other institution types.

Quantum Information Science (QIS): \$260 million in research will advance fundamental understanding of uniquely quantum phenomena that can be harnessed to promote information processing, transmission, and measurement in ways that classical approaches do less efficiently, or not at all. Building upon more

than three decades of exploratory discovery, NSF investment in QIS will help propel the Nation forward as a leading developer of quantum technology. These investments are a key component of the National Quantum Initiative (NQI) and address the Administration's focus on helping build new industries. NSF's QIS investments build upon the agency's longstanding and continuing foundational investments in QIS as well as more recent, interdisciplinary investments in centers and small teams and targeted workforce development efforts. Investments will target all major areas of quantum computing, communications, sensing, networking, and simulation. NSF will continue the investment in Research Experiences for Undergraduates (REU) and NSF Research Traineeship (NRT) awards related to QIS begun in FY21 and will add intentional activities designed to grow the participation of investigators and students from institutions currently underrepresented in QIS.

Advanced Manufacturing: \$418.51 million in research supported by NSF accelerates advances in manufacturing with emphasis on multidisciplinary research that fundamentally alters and transforms manufacturing capabilities, methods, and practices. NSF investments will make producing nextgeneration products and services more efficient and sustainable and will lead to advantages such as less time-to-market, new performance attributes, cost savings, energy savings, and reduced environmental impacts. In FY 2022, these investments will support advanced manufacturing research, future manufacturing research, workforce development, and transition to practice. NSF invests in advanced manufacturing to increase future U.S. prosperity, as well as the Nation's competitiveness, security, and quality of life.

NSF Innovation Corps (I-Corps™): \$40 million. Connects NSF-funded science and engineering research with the technological, entrepreneurial, and business communities, fostering a national innovation ecosystem that links scientific discovery with technology development, societal needs, and economic opportunities. In FY22, NSF expects to fund 250-300 teams, partnering with other federal agencies and programs, states, and regional organizations as well as a set of new I-Corps™ Hubs.

ADVANCE: \$20.5 million, an increase of \$2.5 million. Seeks to increase the representation and advancement of women in academic science and engineering careers. This program encourages IHEs and the broader STEM community to address aspects of STEM academic culture and institutional structure that may differentially affect women faculty and academic administrators.

Louis Stokes Alliances for Minority Participation (LSAMP): \$69.50 million. An alliance based program that works to increase the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in STEM disciplines.

Major Research Equipment and Facilities Construction (MREFC): \$249 million, an increase of \$8 million

Fundamental Research and Development: \$9.43 billion, an increase of \$1.55 billion above the FY21 level, to support research across the spectrum of science, engineering, and technology.

- Biological Sciences: \$948.51 million
- Computer and Information Science and Engineering: \$1.1 billion
- Engineering: \$916.79 million
- Geosciences: \$1.2 billion
- Mathematics and Physical Sciences: 41.7 billion
- Social, Behavioral, and Economic Sciences: \$319.66 million
- Integrative Activities: \$504.9 million

Education and Human Resources (EHR): \$1.3 billion

- Scholarships for Science, Technology, Engineering and Mathematics (S-STEM): \$121.85 million, a decrease of \$10.9 million
- Discovery Research K-12: \$53.2 million, level funding
- EHR Core Research: STEM Learning: \$37.07 million, an increase of \$8 million
- Robert Noyce Teacher Scholarship Program: \$67 million
- Innovative Technology Experiences for Students and Teachers (ITEST): \$30.06 million, a decrease of \$2.69 million
- CyberCorps Scholarships for Service Program: \$70 million, an increase of \$10 million
- EHR Core Research: STEM Professional Workforce Preparation: \$20.11 million, an increase of \$1.99 million

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Webinar and Events

Event: NSF Virtual Grants Conference

Sponsor: NSF

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

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

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

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

Highlights include:

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

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

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

Event: Invention to Impact

Sponsor: NSF

When: June 9, 2021 2:00 PM - 3:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302821&org=NSF

Brief Description: Innovation programs at NSF advance ideas from the laboratory to the marketplace to strengthen America's economy, health, and security. The IIP Division in the Engineering Directorate leads several programs to translate fundamental research into market solutions. IIP supports and trains researchers with promising technologies, as well as funding high-tech startups.

In this webinar, hear from Dr. Andrea Belz, IIP Division Director, about the NSF's central role in accelerating the growth of the national ecosystem and about specific funding opportunities available. **Dr. Andrea Belz** joined NSF in May 2019 as IIP Division Director to lead several programs to translate fundamental research into market solutions. Previously, Andrea served as Vice Dean for Technology Innovation and Entrepreneurship in the University of Southern California (USC) Viterbi School of Engineering, as well as Entrepreneur-in-Residence (Technology) of Industrial and Systems Engineering. From 2014 to 2019, Andrea was the Founding Director of Innovation Node-Los Angeles, a regional hub for the NSF I-Corps™ program. She has worked with many university startups and investors, most recently representing a major angel investing group on the board of a Caltech spinoff laser manufacturer until its acquisition in 2018. For nearly 20 years, Andrea has advised universities, corporations and other organizations on commercialization opportunities as managing member of the Belz Consulting Group.

To Join the Webinar: Register

here: https://nsf.zoomgov.com/webinar/register/WN_6Z5oyJJKTQitTjxsZVcUDA

Event: MCB Virtual Office Hour: How to Write a Great NSF Proposal

Sponsor: NSF

When: June 9, 2021 2:00 PM to 3:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302807&org=NSF

Brief Description: Please join us for our Virtual Office Hour to learn about ongoing and new opportunities at the National Science Foundation and the Division of Molecular and Cellular Biosciences (MCB)!

This Office Hour will be Wednesday, June 9th from 2-3pm EST, where we will discuss “How to Write a Great NSF Proposal” followed by an open Q&A session. Questions should also be broad and of potential interest to others.

To Join the Webinar: Please register [here](#).

Join us remotely to listen and learn! For alerts on future MCB Virtual Office Hours and access to past Office Hours, please subscribe to the [MCB Blog](#).

URI Webinar: Research Computing and Cybersecurity

Sponsor: NJIT Office of Research

When: June 17, 2021; 2.00 PM – 3.00 PM

Moderator: Kamalika Sandell, Vice Provost and Chief Information Officer

Panelists (invited):

- Forough Ghahramani, AVP, Edge
- Jay Boisseau, Strategist, Dell
- Rick Carbonaro President, TPS Cyber

Brief Description: This session will provide information about Advanced Research Computing resources at NJIT and how to leverage cloud computing assets. Research data is sensitive and researchers today need to attend to security and compliance needs for specialized research related to Defense, Security, and Health studies. The session will discuss security needs for handling research data so that it can be protected against cyberattacks without hindering core research activities.

To Join the WebEx Webinar: Attendees should log-in using the link:

<https://njit.webex.com/njit/j.php?MTID=m59de162390129d440e39dffaabea7738>

Event: DEB Virtual Office Hour: How to Write a Great NSF Proposal

Sponsor: NSF

When: June 14, 2021 1:00 PM to 2:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302749&org=NSF

Brief Description: Join us Monday, June 14 from 1-2PM Eastern Time for DEB's next Virtual Office Hour. Program Officers will provide insight on how to write a great proposal. Representatives from each of the four DEB core programs will be available for questions. To participate, please use the registration link below. Upcoming DEB Virtual Office Hours are announced ahead of time on DEBrief, [so we suggest you also sign up for blog notifications](#).

To Join the Webinar: [REGISTER HERE](#)

Event: DMS Virtual Office Hours

Sponsor: NSF

When: June 18, 2021 2:00 PM to 3:00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=302839&org=NSF

Brief Description: The Division of Mathematical Sciences (DMS) is hosting virtual office hours to share information about NSF's current operations and to provide guidance to the mathematical sciences community. All members of the mathematical sciences research community interested in the work of DMS are welcome to attend.

Virtual office hours are held at roughly monthly intervals; topics vary. The event will be in the form of a webinar, starting with a brief presentation of selected current topics, with DMS program directors available to answer questions from the community.

To Join the Webinar: Participants should register (and may do so in advance) at the web page https://nsf.zoomgov.com/webinar/register/WN_WWhciTBITDWVGfhsenzjpw

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[Grant Opportunities](#)

[National Science Foundation](#)

Grant Program: Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)

Agency: National Science Foundation NSF 21-591

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21591/nsf21591.htm>

Brief Description: The NSF Directorate for Computer and Information Science and Engineering (CISE) seeks to award grants intended to support research independence among early-career academicians who specifically lack access to adequate organizational or other resources. It is expected that funds obtained through this program will be used to support untenured faculty or research scientists (or equivalent) in their first three years in a primary academic position after the PhD, but not more than six years after completion of their PhD for proposals submitted in 2021, and not more than five years after completion of their PhD for proposals submitted after 2021. Applicants for this program may not yet have received any other grants or contracts in the PI role from any department, agency, or institution of the federal government, including from the CAREER program or any other program, post-PhD, regardless of the size of the grant or contract, with certain exceptions as noted below. Serving as co-PI, Senior Personnel, Postdoctoral Fellow, or other Fellow does not count against this eligibility rule.

Importantly, the CRII program seeks to provide essential resources to enable early-career PIs to launch their research careers. For the purposes of this program, CISE defines "essential resources" as sufficient funds for 48 months of graduate student support. Faculty at undergraduate and two-year institutions may use funds to support undergraduate students, and may optionally use the additional RUI designation (which requires inclusion of a RUI Certification and RUI Impact Statement) --

see https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518 for additional information. In addition, submissions from all institutions may use funds for PI salary, postdoctoral scholars, travel, and/or research equipment.

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

Letters of Intent: Not Required

Full Proposal Submission Deadline: September 20, 2021

Contacts: Jeremy J. Epstein, telephone: (703) 292-8338, email: jepstein@nsf.gov

- Ephraim P. Glinert, Program Director, IIS, telephone: (703) 292-8930, email: eglinert@nsf.gov
 - Almadena Y. Chtchelkanova, Program Director, CCF, telephone: (703) 292-8910, email: achtchel@nsf.gov
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Grant Program: Predictive Intelligence for Pandemic Prevention Phase I: Development Grants (PIPP Phase I)

Agency: National Science Foundation NSF 21-590

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21590/nsf21590.htm>

Brief Description: This solicitation is for Development Grants as part of NSF's new Predictive Intelligence for Pandemic Prevention (PIPP) initiative. This initiative focuses on fundamental research and capabilities needed to **tackle grand challenges in infectious disease pandemics through prediction and prevention**. NSF anticipates releasing a Phase II Center Grants solicitation around 2023. Note that submission or award of a Development Grant is not required to participate in the anticipated PIPP Phase II Center Grants competition.

The PIPP Phase I initiative intends to support planning activities encompassing (1) articulation of a grand challenge centered around a critical and broad question in pandemic predictive intelligence; (2) proposals of novel conceptual research and technology developments that aim to advance state-of-the-art forecasting, real-time monitoring, mitigation, and prevention of the spread of pathogens; and (3) multidisciplinary team formation. *Successful Phase I proposals must identify an innovative interdisciplinary grand challenge that engages integrated computational, biological, engineering, and social/behavioral approaches to formulate and solve critical problems relating to predictive intelligence for pandemic prevention. PIs of Phase I Development Grants are strongly encouraged to develop research and technical approaches that start to address critical aspects of the identified grand challenge.* NSF's PIPP activities place great emphasis on high-risk/high-payoff convergent research that has the potential for large societal impact. To that end, prospective principal investigators (PIs) must develop teams and proposals that work across scientific, disciplinary, geographic, and organizational divides, push conceptual boundaries, and build new theoretical framings of the understanding of pandemic predictive intelligence.

The Directorates for Biological Sciences (BIO), Computer Information Science and Engineering (CISE), Engineering (ENG), and Social, Behavioral and Economic Sciences (SBE), are jointly collaborating to support the PIPP Phase I activities. Involvement of and collaboration with other research communities with significant effort in related spaces is highly encouraged.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: \$25,000,000

Letters of Intent: Not Required

Full Proposal Submission Deadline: October 01, 2021

Contacts: Mitra Basu, telephone: (703) 292-8649, email: PIPP@nsf.gov

- Katharina Dittmar, telephone: (703) 292-7799, email: PIPP@nsf.gov
 - John Zhang, telephone: (703) 292-8111, email: PIPP@nsf.gov
-

Grant Program: Division of Chemistry: Disciplinary Research Programs (CHE-DRP)

Agency: National Science Foundation NSF 21-589

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21589/nsf21589.htm>

Brief Description: This solicitation applies to nine CHE Disciplinary Chemistry Research Programs: Chemical Catalysis (CAT); Chemical Measurement and Imaging (CMI); Chemical Structure, Dynamics and Mechanisms-A (CSDM-A); Chemical Structure Dynamics and Mechanisms-B (CSDM-B); Chemical Synthesis (SYN); Chemical Theory, Models and Computational Methods (CTMC); Chemistry of Life Processes (CLP); Environmental Chemical Sciences (ECS); and Macromolecular, Supramolecular and Nanochemistry (MSN).

All proposals submitted to these nine CHE Disciplinary Research Programs (other than the following exceptions) must be submitted through this solicitation, otherwise they will be returned without review.

Exceptions:

- Faculty Early Career Development Program (CAREER) proposals should be submitted through the CAREER solicitation (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214) by the CAREER deadline date specified.
- Facilitating Research at Primarily Undergraduate Institutions: Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA) proposals should be submitted through the RUI/ROA solicitation (https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518) during the window for the appropriate CHE Disciplinary Research Program. In addition to the requirements of the RUI program, proposals should follow the guidance in this solicitation.
- Proposals for Early-concept Grants for Exploratory Research (EAGER), Grants for Rapid Response Research (RAPID), Research Advanced by Interdisciplinary Science and Engineering (RAISE), and conferences can be submitted anytime after consultation with the cognizant NSF Program Officer.
- Supplemental funding requests to existing grants can be submitted anytime after consultation with the cognizant NSF Program Officer.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: \$155,000,000

Letters of Intent: Not Required

Full Proposal Submission Deadline: September 01, 2021 - September 30, 2021

Contacts: For CLP: Catalina Achim, telephone: (703) 292-2048, email: cachim@nsf.gov

- For CSDM-A: John M. Papanikolas, telephone: (703) 292-8840, email: jpapanik@nsf.gov
- For CMI: Kelsey D. Cook, telephone: (703) 292-7490, email: kcook@nsf.gov

Grant Program: EHR Core Research (ECR:Core)

Agency: National Science Foundation NSF 21-588

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21588/nsf21588.htm>

Brief Description: The EHR Core Research (ECR) program offers this ECR:Core solicitation and invites proposals for fundamental research (curiosity-driven basic research and use-inspired basic research) that contributes to the general, explanatory knowledge that underlies STEM education in one or more of the three broadly conceived Research Areas: **Research on STEM Learning and Learning Environments**, **Research on Broadening Participation in STEM fields**, and **Research on STEM Workforce Development**. Within this framework, the ECR program supports a wide range of fundamental STEM education research activities, aimed at learners of all groups and ages in formal and informal settings.

Fundamental research generates knowledge and understanding with the potential for broad relevance. The potential implications of ECR fundamental research for improving STEM education practice may be indirect and long-term rather than direct and immediate. Moreover, whether they include basic or use-

inspired basic research, all successful ECR:Core proposals focus on the advancement or refinement of foundational knowledge for STEM education.

Awards: Standard Grant or Continuing Grant; Anticipated Funding Amount: \$35,000,000

The amount of funding and duration requested in proposals submitted to the ECR: Core solicitation should align with the maturity of the proposed work and the size and scope of the empirical effort. The solicitation has three levels of funding with a range of budget sizes, and proposals may request a duration of 3 to 5 years for any level: (1) **Level I proposals** may request up to \$500,000; (2) **Level II proposals** may request up to \$1,500,000; (3) **Level III proposals** may request up to \$2,500,000. **All proposals should justify the level of funding and duration in the project description.**

Letters of Intent: Not Required

Full Proposal Submission Deadline: October 07, 2021

Contacts: Address questions to the program, telephone: (703)292-2333, email: ECR@nsf.gov

Grant Program: Centers for Chemical Innovation (CCI)

Phase I Awards and New/Renewal Phase II Centers

Agency: National Science Foundation NSF 21-587

RFP Website: <https://www.nsf.gov/pubs/2021/nsf21587/nsf21587.htm>

Brief Description: The Centers for Chemical Innovation (CCI) Program supports research centers focused on major, long-term fundamental chemical research challenges. CCIs that address these challenges will produce transformative research, lead to innovation, and attract broad scientific and public interest. CCIs are agile structures that can respond rapidly to emerging opportunities through enhanced collaborations. CCIs integrate research, innovation, education, broadening participation, and informal science communication.

The CCI Program is a two-phase program. Both phases are described in this solicitation. Phase I CCIs receive significant resources to develop the science, management and broader impacts of a major research center before requesting Phase II funding. Satisfactory progress in Phase I is required for Phase II applications; Phase I proposals funded in FY 2022 will seek Phase II funding in FY 2025.

The FY 2022 Phase I CCI competition is open to projects in all fields supported by the Division of Chemistry, and must have scientific focus and the potential for transformative impact in chemistry. The NSF Division of Chemistry particularly encourages fundamental chemistry projects aligned with articulated budget priorities, including Advanced Manufacturing, Artificial Intelligence, Biotechnology, Climate Research and Sustainability, and Quantum Information Science. More information on all of these is available in Section IX of this Program Solicitation.

Awards: Standard Grant or Continuing Grant or Cooperative Agreement; Anticipated Funding Amount: \$9,400,000

Letters of Intent: Not Required

Full Proposal Submission Deadline:

- **Preliminary Proposal Due Date(s) (required):** August 23, 2021
- **Full Proposal Deadline(s):** October 19, 2021

Phase II Full Proposals: February 22, 2022

Phase I Full Proposals, by invitation only

Contacts: Katharine J. Covert, telephone: (703) 292-4950, email: kcovert@nsf.gov

- Colby A. Foss, telephone: (703) 292-5327, email: cfoss@nsf.gov
- Lin He, telephone: (703) 292-4956, email: lhe@nsf.gov

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National Institutes of Health

Grant Program: NIH Blueprint MedTech Pilot Award to Accelerate Early-Stage Neurotechnologies

Agency: NIH-NIBIB-POCTRN CIMIT

Website: <https://www.poctrn.org/blueprint-medtech-pilot>

Brief Description: In support of the Blueprint MedTech Pilot, the Point of Care Technology Research Center (POCTRN) at CIMIT seeks groundbreaking collaborative research projects in the early stages of translation to improve the diagnosis and treatment of disorders of the nervous system. Applications must present potentially transformative solutions to unmet needs with an ultimate goal of improving healthcare outcomes. If successful, projects should be viable candidates for commercial development. We are seeking proposals from academic and industry applicants who have innovative early-stage technologies that aim to improve the diagnosis and/or treatment of disorders of the nervous system.

Awardees will also have the unique opportunity to work directly with mentors experienced in commercializing neurotech devices to help address project related business, regulatory, clinical, and technical issues.

Award: Awards up to \$100K are available to the most promising and innovative neurotechnologies to help support their development journey toward commercialization.

Letter of Intent: Pre-Proposals are required.

Proposal Deadline: Pre-proposals are due no later than: June 21, 2021

Contact: Please contact Blueprint-MedTech@nih.gov if you have any questions about the program.

Grant Program: NIH Director's Transformative Research Awards (R01 Clinical Trial Optional)

Agency: National Institutes of Health RFA-RM-21-017

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-21-017.html>

Brief Description: The [NIH Director's Transformative Research Award](#) Program supports collaborative investigative teams or individual scientists who propose unusually innovative research projects, which, if successful, would have a major impact in a broad area of relevance to the NIH. To be considered transformative, projects must have the potential to create or overturn fundamental scientific paradigms through novel concepts or perspectives, transform the way research is conducted through the development of novel tools or technologies, or lead to major improvements in health through the development of highly innovative diagnostic, therapeutic, or preventive strategies.

Several key features of this FOA are designed to emphasize to applicants and peer reviewers that Transformative Research applications are very different from conventional, investigator-initiated research applications. The Transformative Research application focuses on the importance of the problem, the novelty of the hypothesis and/or the proposed methodology, and the magnitude of the potential impact rather than on preliminary data or experimental details. Reviewers will be instructed to emphasize the significance and innovation of the application in their evaluations. Applicants and reviewers should keep the goal of the Transformative Research Award initiative in mind throughout the process– to solicit and fund unusually innovative and potentially transformative research.

Awards: Application budgets are not limited but must be commensurate with the scope of the proposed research.

Letter of Intent: Not Applicable

Proposal Submission Deadline: September 01, 2021

All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates. 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: Transformative_Awards@mail.nih.gov

Grant Program: Mentored Career Development Award to Promote Faculty Diversity in Biomedical Research (K01 Independent Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-HL-22-011

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-HL-22-011.html>

Brief Description: NHLBI encourages research training and career development crossing disciplinary boundaries (e.g., biophysics, biostatistics, bioinformatics, bioengineering, systems science, and big data science) to develop a new interdisciplinary work force. Also of interest to NHLBI are training and career development efforts that focus on implementation research which recognize the numerous knowledge and practice gaps that impede evidence-based interventions from producing optimal health outcomes.

The research proposed must be directly responsive to the mission of the NHLBI. The NHLBI does not support projects primarily focused on malignancy-related research. Studies that address a mechanistic correlation between cancer (i.e., lung cancer) and primary pulmonary diseases may be considered within the mission of the NHLBI. Applications on vaccine development will be considered nonresponsive for this FOA. Applications on respiratory pathogens will be considered within NHLBI's intent for this FOA if studies focus on the host immune response. Other potential overlapping areas of interest shared by the NHLBI and other Institutes/Centers of the NIH include myeloproliferative and myelodysplastic disorders, hematological malignancies resulting from disruptions in hematopoiesis, and the use of hematopoietic stem cell transplantation and other cellular therapies. Therefore, applicants are strongly encouraged to contact the NHLBI before submitting an application to determine the NHLBI programmatic appropriateness for this FOA and the mission of the NHLBI.

Awards: Award budgets are composed of salary and other program-related expenses, as described below. Application budgets must not exceed \$150,000 per year in direct costs. However, applications should reflect the actual needs of the proposed project.

Letter of Intent: Not Applicable

Proposal Submission Deadline: October 14, 2021, February 11, 2022, October 13, 2022, February 14, 2023, October 13, 2023, February 13, 2024, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

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: Jane D. Scott, ScD, MSN, FAHA; National Heart, Lung, and Blood Institute (NHLBI); Telephone: 301-435-0535; Email: scottj2@nhlbi.nih.gov

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

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

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

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

Grant Program: C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research, Cryogenics & Quantum

Agency: Department of Defense Naval Information Warfare Center Pacific N66001-21-S-4700

RFP Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=334026>

Brief Description: Naval Information Warfare Center, Pacific (NIWC Pacific), is soliciting proposals in accordance with FAR 35.016, DoDGARS 22.315(a), and DoD Other Transactions (OT) Guide for Prototype Projects for research in areas relating to the advancement of C4ISR capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems. See II.2 below for further details. Proposed research should investigate unique and innovative approaches for defining and developing next generation integratable C4ISR capabilities and command suites. The area topics reflect the interest of the NIWC Pacific, but interest from other Team NAVWAR components could be generated and selections could be made for funding by other than NIWC Pacific. Excluding offers for other transactions, only offers that are in the areas of basic research, applied research, advanced technology development, and advanced component development and prototypes will be considered (see Appendix A). Testing and optimizing of concepts or prototypes may be necessary. This may involve virtual simulation and/or laboratory as well as at sea measurements. Technical topics of interest include:

1. General C4ISR
2. Command and Control
3. Communications
4. Intelligence, Surveillance and Reconnaissance
5. Unmanned Vehicles
6. Information Operations/Cyberspace Operations
7. Ubiquitous Communications and Computing Environment
8. Science, Technology, Engineering and Mathematics Research
9. Advanced Power and Energy Production and Efficient Use
10. Cryogenics & Quantum*

Awards: Multiple awards are anticipated; NIWC Pacific reserves the right to select for award all, some, one, or none of the proposals received in response to this announcement.

Letter of Intent: Please see below.

Proposal Submission Deadline: This announcement is open for 365 days from the original posting date (6/4/2021). Any white papers received during that time shall only be considered for award of a contract, other transaction, grant, or cooperative agreement. If the Government intends to award a grant or cooperative agreement, it will issue a Research Announcement (RA).

Step 1: White papers may be submitted during the times specified in Part I or further specified in individual Calls. All white papers will be evaluated in accordance with the evaluation criteria identified in Section IV unless further defined in individual Calls. White paper responses will contain the Government evaluation board's opinion of whether the idea expressed in the white paper is likely to generate a successful proposal. Debriefs will not be provided for white paper submissions. Step 2: Proposals may be requested when the Government evaluation board's opinion of the idea expressed in the white paper is likely to generate a successful proposal.

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

Grant Program: DoD Duchenne Muscular Dystrophy, Idea Development Award

Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-21-DMDRP-IDA

RFP Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333851>

Brief Description: The vision of the FY21 DMDRP is to preserve and improve the function and quality of life and to extend the life span of all individuals with Duchenne. As such, the DMDRP is seeking to better characterize Duchenne pathophysiology, support discovery and development of therapeutics, related devices and tools, as well as to promote their rigorous preclinical and clinical testing. Additionally, the DMDRP supports the efforts of the National Institutes of Health (NIH) Muscular Dystrophy Coordinating Committee (MDCC) and the 2015 MDCC Action Plan for the Muscular Dystrophies, which prioritizes the needs to improve treatments and reduce the disease burden for muscular dystrophy, including DMD.

The DMDRP Idea Development Award promotes new ideas that are still in the early stages of development and have the potential to yield impactful data and new avenues of investigation. This award supports conceptually innovative, high-risk/high-reward research that could lead to critical discoveries or major advancements that will accelerate progress in improving outcomes for individuals with DMD. Applications should include a well-formulated, testable hypothesis based on strong scientific rationale.

Awards: The anticipated direct costs budgeted for the entire period of performance for an FY21 DMDRP Idea Development Award will not exceed \$350,000. Estimated Total Program Funding: \$4,480,000

Letter of Intent: Please see below.

Proposal Submission Deadline: Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), August 11, 2021 • Invitation to Submit an Application: September, 2021 • Application Submission Deadline: 11:59 p.m. ET, December 1, 2021

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

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

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. 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 blindness¹. 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

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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, 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

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](#).

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

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

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Department of Commerce/EDA

Grant Program: NIST Public Safety Innovation Accelerator Program – Artificial Intelligence for IoT Information Prize Competition

Agency: U.S. Department of Commerce NIST 2021-NIST-AI3-01

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333855>

Brief Description: The NIST’s Public Safety Innovation Accelerator Program (PSIAP) is seeking applications from eligible applicants for activities to collaborate with technical experts from NIST, industry/academia, and public safety in developing and implementing the Artificial Intelligence for IoT Information (AI3) Prize Competition. The AI3 Prize Competition aims to utilize artificial intelligence learning techniques to make disparate situational awareness data sources actionable for first responders. The AI3 Prize Competition seeks to attract experts and innovators from industry and academia to focus on this difficult challenge by offering a monetary prize purse and an opportunity to help public safety solve this overarching problem. The AI3 Prize Competition award will include all aspects of prize development, implementation, and postcompetition publicity and evaluation of the project impact.

Awards: NIST anticipates funding 1 award for approximately \$1,200,000 with a project performance period of up to 2 years.

Letter of Intent: Contact the program director.

Proposal Deadline: Full Applications must be received at Grants.gov no later than 11:59 p.m. Eastern Time, July 26, 2021.

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

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).

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

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

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

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EPA

Grant Program: Improving Community Health through Microbial Source Tracking

Agency: Environmental Protection Agency EPA-GM-2021-MIST

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=333927>

Brief Description: This Request for Applications (RFA) solicits applications from eligible entities for grants and/or cooperative agreements to be awarded. These awards will improve water quality, habitat, community resilience, and environmental education in the Gulf of Mexico watershed within the Continental United States (see individual funding opportunities for geographic specifications). For a list of projects funded by the Gulf of Mexico Division (GMD) under previous RFAs, please see the [EPA Gulf of Mexico story map](#). EPA is seeking applications for projects within the four funding opportunities listed below, each of which has a separate Funding Opportunity Number (FON) and is separately posted on www.grants.gov. Applicants must apply for the specific funding opportunity they are interested in. The four funding opportunities and associated FONs are:

- **Improving Community Health through Microbial Source Tracking** (FON: EPA-GM-2021-MiST)
- **Trash Free Waters – Preventing More, Picking Up Less** (FON: EPA-GM-2021-TFW)
- **Building Community Resilience Through the Reduction and Prevention of Nonpoint Source Pollution** (FON: EPA-GM-2021-NPS)
- **STEM Career Development for High School Aged Youth** (FON: EPA-GM-2021-HSCD)

Award: Up to \$1,500,000. Anticipated Funding Amount: Approximately \$9 million

Submission Deadline: August 6, 2021

Contact: U.S. Environmental Protection Agency Gulf of Mexico Division ATTN: Rachel Houge 2510 14th Street – Suite 1212 Gulfport, MS 39501 [Rachel Houge](#)

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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

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

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[NASA](#)

Grant Program: NASA Innovative Advanced Concepts (NIAC) Phase I

Agency: NASA 80HQTR21NOA01-22NIAC-A1

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?sollId=%7B45A3E9E1-E315-0A5A-C5EE-AC9732306EEC%7D&path=&method=init>

Brief Description: The NASA Innovative Advanced Concepts (NIAC) Program focuses on early stage feasibility studies of visionary concepts that address national government and commercial aerospace goals. Concepts are solicited from any field of study that offers a radically different approach or disruptive innovation that may significantly enhance or enable new human or robotic science and exploration missions. The NIAC Program supports innovative research through multiple phases of study. Phase I awards are for up to nine-month efforts funded at up to \$175,000 to explore the overall feasibility and viability of visionary concepts. Phase II awards are up to two years efforts with total funding of up to

\$500,000 (per award) to further develop the most promising Phase I concepts, and to explore potential infusion options within and beyond NASA. Concepts should be sufficiently well developed at the end of Phase II to seek follow on development funds from other NASA programs, external government programs, or commercial partners. However, in rare instances there may be a compelling need for the strategic investment of additional NIAC funds to further advance Phase II concepts with clearly defined transition paths into other NASA, government, or commercial programs. Phase III awards are designed to meet this need, with the anticipated selection of no more than one new award per year. Phase III studies will be funded for a maximum duration of two years at a total funding level of up to \$2,000,000 per award. NIAC will later release separate REsearch, Development, Demonstration, and Infusion (REDDI) Appendices soliciting Phase II and Phase III proposals, respectively. NIAC will allow sufficient time for eligible Phase I Fellows awarded in this solicitation to apply for Phase II follow-on support of up to two more years of study and development.

Awards: Up to \$175,000; Multiple awards

Notice of Intent: Contact program director

Proposal Deadline: Step-A Proposals Due: July 21, 2021 (5:00 pm Eastern)

Contact: Jason Derleth NIAC Program Executive Space Technology Mission Directorate, NASA Headquarters hq-niac@mail.nasa.gov

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

Grant Program: ROSES 2021: Instrument Incubator Program

Agency: NASA NNH21ZDA001N-IIP

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

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

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

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

Proposal Deadline: July 20, 2021

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

Grant Program: ROSES 2021: 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: September 8, 2021, and Step-2 proposals: November 18, 2021.

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

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

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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

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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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