

NJIT Research Newsletter

Issue: ORN-2020-30

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

NJIT Pandemic Recovery Plan

Research Continuity and Phased Recovery Plan

Guidelines and Protocols: Phase-1, Phase-2 and Phase-3 Research Operations

Updated: July 27, 2020

NJIT faculty, staff, and students at research facilities must follow the specific social distancing and safety protocols including the use of personnel protective equipment (PPE) as required by the institutional, state and federal guidelines in the respective phase of the research continuity plan. State and national information regarding current conditions can be found at:

- New Jersey's COVID-19 information hub: <https://covid19.nj.gov/index.html>
- White House Plan for Opening up America Again: <https://www.whitehouse.gov/wp-content/uploads/2020/04/Guidelines-for-Opening-Up-America-Again.pdf>

- CDC guidelines on “Symptoms of Coronavirus”: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- CDC guidelines on “Use of Cloth Face Coverings to Help Slow the Spread of COVID-19”: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>

For Phase-1 Research Recovery Plan with minimal research operations, the following protocols and guidelines should be adapted.

Recovery Phase-1 Protocol

Minimal research operations approved through chairs, deans and senior vice provost for research to pursue time-sensitive priority research such as projects related to COVID-19 response; approved Essential Research Operation (ERO) plans in Phase-0; long-term research experiments with cell-lines, animals, and human subjects that were already underway before Phase-0; grants and contracts expiring within six months; submission of proposals in response to special solicitations (Requests for Proposals); and projects involving students with graduation requirements.

- Requests for projects considered time-sensitive should be directed to departmental chairs. The dean and senior vice provost for research will provide guidance as needed.
- All research operations at NJIT facilities in this phase must follow the highest possible level of social distancing implemented.
- Research that can be conducted remotely should be continued to the extent possible.
- As on-campus operations are limited following the state and institutional safety regulations, visiting access to on-campus facilities is restricted.
- New applications for visiting scholars for research are on hold until NJIT enters the “new normal” phase of recovery.

Recovery Phase-1 Implementation Guidelines:

The minimal research operations including all approved essential research operation (ERO) plans approved in Phase-0 and time-sensitive research non-essential research operations (approved through chair, dean and research offices) should be restored. All social distancing and safety protocols must be strictly followed in research labs as follows.

1. **Phase-1 Research Operation (PRO-1) Plan Approval:** (Initiated by faculty/PI; approved by chair, dean and senior vice provost for research): The faculty who have submitted ERO plans for Phase-0 do not need to resubmit their project descriptions as long as there are no significant changes in research operations and social distancing and safety protocols are followed. Additional time-sensitive non-essential research operation plans as defined above should be submitted following the Phase-1 Research Operation (PRO-1) form to department chair and college dean for their approvals and forwarding to the research office for institutional approval. The PRO-1 form can be downloaded from the research website <https://research.njit.edu/njit-pandemic-recovery-plan>.
2. **Lab Access Schedule:** (Initiated by faculty/PI; approved by chair): Number of people in a research lab should be limited to observe safe distancing. Depending on the type of experiment and research equipment in the lab, it is up to the research lab/center director or PI to develop a time-based schedule to allow specific researchers (faculty, research professors, post-docs, students and staff) access to the lab. It is recommended that flexible schedules specifically for researchers requiring supervision should be developed to access research labs. These lab access schedules

should be submitted to respective department chair along with specific needs to implement safety protocols such as disinfecting supplies, face masks, gloves etc.

- Lab Access and Safety Monitoring Logbook:** (Implemented by faculty/PI and reported to department chair): The research lab/center director should maintain a Lab Access and Safety Monitoring (LASM) logbook to follow the lab access schedules and safety monitoring of individual researchers on a daily basis. The following is the suggested format for the logbook (a template spreadsheet file is posted on the website <https://research.njit.edu/njit-pandemic-recovery-plan>). If the answer to any question from column 4 to 6 is positive, the researcher must inform the lab director who should report it to the HR following the institutional reporting policy. If the answer to the question in column 7 is negative, the researcher should immediately inform the lab director/staff to access PPE supplies. If any answer to the questions in column 8-9 is negative, the researcher should immediately inform the lab director/staff who should report it as a potential incidence as described in section (4) below.

Lab/Center/Lab/Facility Name:								
Lab/Center/Lab/Facility Location:								
Lab Director/PI Name and Contact Information:								
Lab Staff Name (If applicable):								
Date:								
Researcher Name and Contact Information	Arrival Time	Leaving Time	Do you have any temperature or COVID-19 symptoms today?	Did you have any temperature or COVID-19 symptoms in last two weeks related to COVID-19?	Do you think that you had any exposure to COVID-19 in past two weeks?	Do you have personnel protective equipment (PPE) with you?	During your time in the lab did you maintain safe distancing all the time?	During your time in the lab did you use PPE all the time?
1	2	3	4	5	6	7	8	9
Target Answers			No	No	No	Yes	Yes	Yes

- Safety Instruction Displays and Incidence Reporting:** (Implemented by faculty/PI and reported to department chair, college dean and other offices as needed): All research labs and centers should display posters on social distancing and safety instructions as recommended by the EHS department. Any incidence of violation of safety protocols should be promptly reported to department chair, campus safety and HR following the institutional guidelines.

Following the CDC guidelines, it is recommended that disposable face coverings and dust/surgical masks should be used for general activities in NJIT research laboratories. The N-95 masks are appropriately used for high risk activities in health care delivery, emergency response, and law enforcement. If there are specific laboratory hazards that require the use of N-95 masks for healthcare or medical needs following the OSHA guidelines, they should be separately discussed with the college dean and EHS department for further consideration outside the general research recovery plan.

Phase-2 Recovery Protocol

Most research operations, whether sponsored through external grants and contracts or internally funded, may be restarted through the approval of department chairs using significant social distancing and safety protocols with restrictions on the number of researchers and staff present in laboratories at one time.

- The Phase 2 restart may require developing flexible work schedules, plan for supply chain issues, and prepare core and fabrication facilities in advance of need. To ensure social distancing requirements and to reduce density of research personnel in university research spaces, the lab directors should consider permitting flexible lab access schedules, work shifts or staggered workdays, and extended facilities support to enable more round-the-clock operation of research facilities. Under no circumstances should safety be sacrificed due to lack of adequate supplies, type, and quality of PPE.
- Research that can be conducted completely remotely should continue to be conducted in that manner. In addition, work that can be done remotely in conjunction with necessary on-campus work should be done remotely.
- As on-campus operations are limited following the state and institutional safety regulations, visiting access to on-campus facilities is restricted.
- New applications for visiting scholars for research are on hold until NJIT enters the “new normal” phase of recovery.

Recovery Phase-2 Implementation Guidelines:

The most research operations including all approved essential research operation (ERO) and non-essential Phase-1 Research Operations (PRO-1) plans approved, respectively, in Phase-0 and Phase-1, and Phase-2 Research Operations (PRO-2) with funded research projects (approved by department chair) should be restored. All required social distancing and safety protocols must be strictly followed in research labs as follows,

1. **Phase-2 Research Operation (PRO-2) Plan Approval:** (Initiated by faculty/PI; approved by chair): The faculty who have submitted ERO plans for Phase-0 and PRO-1 plans for Phase-1 do not need to resubmit their project descriptions as long as there are no significant changes in research operations and required social distancing and safety protocols are followed. Additional externally and internally funded research operation plans should be submitted following the Phase-2 Research Operation (PRO-2) form to department chair for approval.
2. **Lab Access Schedule:** (Initiated by faculty/PI; approved by chair): Number of people in a research lab should be limited to observe safe distancing. Depending on the type of experiment and research equipment in the lab, it is up to the research lab/center director or PI to develop a time-based schedule to allow specific researchers (faculty, research professors, post-docs, students and staff) access to the lab. It is recommended that flexible schedules specifically for researchers requiring supervision should be developed to access research labs. Researchers and students may work in the lab in small groups on different days and/or at different times during the days to enforce social distancing and avoid overcrowding at the facility. These lab access schedules should be submitted to respective department chair along with specific needs to implement safety protocols such as disinfecting supplies, face masks, gloves etc.
3. **Lab Access and Safety Monitoring Logbook:** (Implemented by faculty/PI and reported to department chair): The research lab/center director should maintain a Lab Access and Safety Monitoring (LASM) logbook to follow the lab access schedules and safety monitoring of individual researchers on a daily basis. The following is the suggested format for the logbook (a Google spreadsheet template file is posted on the website/shared-drive). If the answer to any question from column 4 to 6 is positive, the researcher must inform the lab director who should report it to the HR following the institutional reporting policy. If the answer to the question in column 7 is negative, the researcher should immediately inform the lab director/staff to access PPE supplies. If any answer to the questions in column 8-9 is negative, the researcher should

immediately inform the lab director/staff who should report it as a potential incidence as described in section (4) below.

Lab/Center/Lab/Facility Name:								
Lab/Center/Lab/Facility Location:								
Lab Director/PI Name and Contact Information:								
Lab Staff Name (If applicable):								
Date:								
Researcher Name and Contact Information	Arrival Time	Leaving Time	Do you have any temperature or COVID-19 symptoms today?	Did you have any temperature or COVID-19 symptoms in last two weeks related to COVID-19?	Do you think that you had any exposure to COVID-19 in past two weeks?	Do you have personnel protective equipment (PPE) with you?	During your time in the lab did you maintain safe distancing all the time?	During your time in the lab did you use PPE all the time?
1	2	3	4	5	6	7	8	9
Target Answers			No	No	No	Yes	Yes	Yes

4. **Safety Guidelines, Instruction Displays and Incidence Reporting:** (Implemented by faculty/PI and reported to department chair, college dean and other offices as needed): All research labs and centers should display posters on social distancing and safety instructions as recommended by the EHS department. COVID-19 safety protocols should not supersede existing laboratory safety requirements. Any incidence of violation of safety protocols should be promptly reported to department chair, campus safety and HR following the institutional guidelines.

Phase-3 Recovery Protocol

Most research operations on funded and unfunded projects along with research required for future proposal submissions are restored with minimal social distancing and personnel safety protocols.

- Group meetings and research presentations with faculty, staff and students should be restricted and kept to a minimal size protecting any vulnerable participants. If possible, these meetings should continue to be held online until we reach a state of full recovery.
- Other laboratory safety protocols must be strictly followed.
- Research that can be conducted completely remotely should continue to be conducted in that manner. In addition, work that can be done remotely in conjunction with necessary on-campus work should be done remotely.
- New applications for visiting scholars for research are on hold until NJIT enters the “new normal” phase of recovery.

Phase-3 Recovery Implementation Guidelines:

Please follow the guidelines as described in Phase-2 but with the required minimal social distancing and safety protocols as announced by the state, local and NJIT at that time.

Full Recovery (New Normal): All research operations are restored fully with no specific social distancing requirements. However, all laboratory and personnel safety protocols must be strictly followed.

This document refers to research conducted on the NJIT campus in Newark, NJ, including the physical campus and activities that have direct contact with individuals (human subjects) anywhere. Satellite locations, such as the Big Bear Solar Observatory in California, must follow a similar phased approach informed by local conditions.

Safety Guidelines for Research with Human Subjects:

The NJIT IRB has made the following determinations with regard to approved human subject research protocols. All research activity involving human subjects must be approved by the IRB prior to its start:

Type of Activity Involved in Human Subject Research	Phase 1	Phase 2	Phase 3	Full Recovery
COVID-19 research	Permitted	Permitted	Permitted	Permitted
Direct health benefit to subjects	Permitted	Permitted	Permitted	Permitted
Face-to-face interaction with little or no health benefit to the subjects	Studies must be halted unless approved by chair, dean, and the NJIT IRB. ¹	Studies must be halted unless approved by chair, dean, and IRB co-chairs.	Studies must be halted unless approved by chair, dean, and IRB co-chairs.	Permitted
Online interactions with human subjects or between researchers (No face-to-face interaction)	Permitted	Permitted	Permitted	Permitted

Guidelines or processes put in place for public health considerations are not research procedures and do not need to be reviewed by the IRB. Research changes made to eliminate apparent immediate risk or hazards to the study subjects may be made prior to IRB review (consistent with 45 CFR 46.108(a)(3)(iii) and 45 CFR 46.103(b)(4)(iii)). Such change must be reported to the IRB when possible. If researchers determine that the current situation requires a change in an approved study, the change may be submitted to the IRB for review at any time. If the changes are minor (e.g. changing from in-person interviews to online or phone interviews), the IRB will use an expedited review process for approval consistent with 45 CFR 46.110(b)(1)(ii) and 45 CFR 46.110(b)(2). Research that is suspended by the researcher or institutional officials (e.g. because of campus closure) do not need to be reported.

¹ During the recovery phases, the campus is still not fully open to the general community. Human subject research that has no direct benefit to the subjects, but requires face-to-face interaction needs to be evaluated to ensure that all public health measures can be met, that alternative procedures not involving face-to-face interaction are not possible, and that all subjects are members of the NJIT community as campus would remain closed to the general public. The chair and dean must certify the public health and institutional requirements may be met. The IRB co-chairs will determine if the new conditions continue to pose minimal or less-than-minimal harm to the subjects. During phase-1, the whole IRB committee will be consulted as necessary on cases that involve substantial face-to-face subject interactions.

Questions regarding human subject research should be directed to the IRB co-chairs, Britt Holbrook and Eric Hetherington, at irb@njit.edu.

Lab Safety Guidelines for Animal Care:

Research involving animals at NJIT is regulated by the guidelines outlined in this plan, determinations by Rutgers Newark IACUC, and the status of Rutgers animal care facilities. NJIT and Rutgers Newark's phased reopening will be in alignment as much as possible, however researchers are to keep in mind that local guidelines take precedent (e.g. activities at NJIT must be in accordance with our recovery phase).

Following the Rutgers Newark IACUC guidelines, The chairs and deans for each unit will be approving studies as well as lab schedules who can access the animal facility. Each research lab is expected to submit their lab access plans along with who in the lab would be authorized to work in the vivarium.

Questions regarding research involving animals and animal care procedures at NJIT should contact Eric Hetherington (erich@njit.edu) or Eric Fortune (eric.s.fortune@njit.edu).

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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): Core Programs; Louis Stokes Alliances for Minority Participation (LSAMP); Division of Materials Research: Topical Materials Research Programs: Biomaterials (BMAT), Condensed Matter Physics (CMP), Metals and Metallic Nanostructures (MMN), Polymers (POL) (DMR-TMRP BMAT, CMP, MMN, POL); Graduate Research Fellowship Program (GRFP); Re-entry to Active Research Program (RARE); Ecology and Evolution of Infectious Diseases (EEID); Research Experiences for Teachers (RET) in Engineering and Computer Science; Disaster Resilience Research Grants (DRRG)

NIH: Ethical, Legal and Social Implications (ELSI) Exploratory/Developmental Research Grant (R21); Senator Paul D. Wellstone Muscular Dystrophy Specialized Research Centers (MDSRC) (P50); Harnessing Data Science for Health Discovery and Innovation in Africa; BRAIN Initiative: Tools for Germline Gene Editing in Marmosets (U01); Integrative Research to Understand the Impact of Sex Differences on the Molecular Determinants of AD Risk and Responsiveness to Treatment (R01)

Department of Defense/US Army/DARPA/ONR: Verified Security and Performance Enhancement of Large Legacy Software (V-SPELLS); DoD Combat Readiness, Rapid Development and Translational Research Award; Award for Fundamental Research in Socio-Mathematics of Information and Influence; DoD Pancreatic Cancer, Idea Development Award; Defense Sciences Office Office-wide; C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research

Department of Transportation: Advanced Transportation and Congestion Management Technologies Deployment Initiative

Department of Agriculture: Agriculture and Food Research Initiative - Foundational and Applied Science; Biotechnology Risk Assessment Grants Program; REAP-Renewable Energy Systems and Energy Efficiency Improvements

Department of Labor: Supply Chains Tracing Project; Women in Apprenticeship and Nontraditional Occupations ("WANTO") Technical Assistance Grant Program

EPA: Environmental Workforce Development and Job Training (EWDJT) Grants

Department of Energy: American-Made Solar Prize; Research and Development for Advanced Water Resource Recovery Systems

NASA: Human Exploration Research Opportunities (HERO); ROSES 2020: Science Team for the OCO Missions; SAGE III/ ISS Science Team; Solar Irradiance Science Team; NASA Innovative Advanced Concepts (NIAC) Phase I; The New (Early Career) Investigator Program in Earth Science; ROSES 2020: Space Weather Science Application Operations-to-Research

National Endowment of Humanities: Humanities Initiatives

**Private Foundations: Activate.Org: Activate Fellowships;
Research Corporation for Science Advancement: Cottrell Scholar Award**

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Recent Research Grant and Contract Awards

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

PI: David Shirokoff (PI)

Department: Mathematical Sciences

Grant/Contract Project Title: Collaborative Research: Euler-Based Time-Stepping with Optimal Stability and Accuracy for Partial Differential Equations

Funding Agency: NSF

Duration: 08/15/20-07/31/23

PI: Qiang Tang (PI)

Department: Computer Science – Cybersecurity Center

Grant/Contract Project Title: SaTC: CORE: Medium: Collaborative: Theory and Practice of Cryptosystems Secure Against Subversion

Funding Agency: NSF

Duration: 10/01/18-09/30/21

PI: Horacio Rotstein (PI)

Department: Biological Sciences

Grant/Contract Project Title: Collaborative Research: Dynamic Interactions of Individual Neurons in Supporting Hippocampal Networks Oscillations During Behavior

Funding Agency: NJDOT

Duration: 10/01/20-09/30/25

PI: Iulian Neamtii (PI)

Department: Computer Science – Cybersecurity Center

Grant/Contract Project Title: SHF: Small: Program Analysis for Dependable Clustering

Funding Agency: NSF

Duration: 10/01/20-09/30/23

PI: William Marshall (PI), Pramod Abichandani (Co-PI) and John Federici (Co-PI)

Department: Technology and Business Development, School of Applied Engineering Technology, and Physics
Grant/Contract Project Title: Advanced Development of Asset Protection Technologies for Enhanced Armaments & Soldier Lethality (ADAPT – Phase III)
Funding Agency: U.S. Department of the Army (Picatinny Arsenal)
Duration: 07/10/20-07/09/21

PI: Donald Sebastian (PI)
Department: Technology and Business Development
Grant/Contract Project Title: MIDAS - Modular Industry-Driven Apprenticeship Strategies
Funding Agency: U.S. Department of Labor
Duration: 07/15/19-06/14/23

NJII

PI: Deirdre Christofalo (PI)
Department: NJII
Grant/Contract Project Title: MIDAS - Modular Industry-Driven Apprenticeship Strategies
Funding Agency: U.S. Department of Labor - NJIT (pass Through PCT)
Duration: 07/15/19-06/14/23

PI: Michael van Ter Sluis (PI)
Department: IDEAS iLab-NJII
Grant/Contract Project Title: Advanced Development of Asset Protection Technologies for Enhanced Armaments & Soldier Lethality (ADAPT – Phase III)
Funding Agency: U.S. Department of the Army (Picatinny Arsenal) - NJIT
Duration: 07/10/20-07/09/21

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In the News...

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

Bipartisan Bill with Multi-Agency Effort for Carbon Removal: Sens. Lisa Murkowski, R-Alaska; Kyrsten Sinema, D-Ariz.; Sheldon Whitehouse, D-R.I.; and Shelley Moore Capito, R-W.Va., introduced the “[Carbon Removal, Efficient Agencies, Technology Expertise Act](#)” on Tuesday to bolster carbon reduction efforts. Since the Industrial Revolution — during the late 1700s to early 1800s — the concentration of carbon dioxide, a heat-trapping greenhouse gas, in the atmosphere has increased by 45% and is “the principal human-produced driver of climate change,” [according](#) to a NASA report last year. If enacted, the legislation would establish a carbon management committee within the National Science and Technology Council that would include officials from the White House Office of Science and Technology Policy; Energy, Agriculture and Defense departments; and National Oceanic and Atmospheric Administration.

The committee would create a strategic plan for federal research and technology development on carbon removal and storage as well as oversee four working groups. These groups would focus on oceans, air and land carbon removal through [geological](#) and technological-based strategies.

House of Representatives Passes Second Appropriations Minibus: The House passed a 6-bill \$1.3 trillion appropriations package today, bringing the total number of passed appropriations bills to 11. The last bill remaining is the Legislative Branch - no action is currently planned, though it has been widely speculated that the bill will be used as a vehicle for other "must pass" items. The White House issued a formal veto threat over a variety of provisions, including several affecting the federal workforce. The legislation contains \$1.3 trillion in funding for fiscal 2021, and includes the Defense, Commerce, Justice, Energy and Water Development, Financial Services and General Government, Labor, Health and Human Services, Education, Transportation, and Housing and Urban Development appropriations bills.

New ICE Regulations Will Make For A Semester Without No New International Students: [USA Today](#) (7/30, Ren, Tan) reports on Raven Liu, a student who planned to travel from Beijing to study at the University of Southern California for her first semester. However, the Immigration and Customs Enforcement confirmed last Friday “that newly enrolled international students, such as first-year undergrads and graduate students, will not be allowed to enter the US if their classes are taught fully online.” The rule “doesn’t apply to students who already had been pursuing a degree in the US.” Now, “Liu is preparing to take online classes with a 15-hour time difference,” as her school “scrapped its original plan to provide in-person sessions for fall courses as California’s coronavirus cases set record highs in mid-July.” As a graduate student “starting a new program, ICE’s guidance last week means she won’t be allowed in the country.”

Research Security Bill: A U.S. Senate panel unanimously endorsed [legislation](#) to tighten oversight of federally funded researchers with ties to foreign governments. The move came despite objections from universities whose faculty would come under increased scrutiny if the bill becomes law. The bipartisan support from the Committee on Homeland Security and Government Affairs for the Safeguarding American Innovation Act (S. 3997) reflects an apparent growing consensus that Congress should respond to Chinese-backed research collaborations seen as threatening national security. The bill includes expanded authority for the State Department to limit immigration, stiffer penalties for scientists who fail to disclose their foreign ties on grant applications, a lower threshold for individuals and institutions to report foreign gifts, and a new research oversight body led by the White House Office of Management and Budget. However, a bevy of higher education organizations are worried that taking such actions would actually undermine innovation by making U.S. institutions less attractive to foreign scholars and increase paperwork requirements without making the country safer. More information is on the [website](#).

NSF Releases INCLUDES Special Report: The National Science Foundation (NSF) has [issued a “special report to the nation”](#) to provide updates on its Inclusion Across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science, or [INCLUDES](#), program. As one of the NSF’s [10 Big Ideas](#), INCLUDES seeks to develop new strategies to broaden the participation of underrepresented groups in science, technology, engineering and mathematics. The report provides highlights on developing alliance networks and includes lessons learned about increasing broadening participation efforts.

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Webinar and Events

Event: Webinar: Disaster Resilience Research Grants Webinar

Sponsor: NSF

When: August 3, 2020 3.00 PM – 4.30 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=300951&org=NSF

Brief Description: NSF and the National Institute for Standards and Technology (NIST) recently announced the [Disaster Resilience Research Grants \(DRRG\) \(NSF 20-581\)](#) opportunity.

The program calls for research proposals to advance fundamental understanding of disaster resilience in support of improved, science-based planning, policy, decisions, design, codes, and standards.

Prospective investigators can learn about the DRRG opportunity in a webinar at 3:00 PM eastern on August 3, 2020.

To Join the Webinar: [See webinar details and register in advance](#); registration closes on July 30.

Event: Webinar: Regulatory Affairs on the RADx Frontlines: Perspective from a Point-of-Care Technology Research Center

Sponsor: NIH POCTRN

When: August 4, 2020 2.00 PM – 3.00 PM

Website: <https://www.poctrn.org/radx>

Brief Description: In response to COVID-19 pandemic, POCTRN has helped to launch the RADx initiative to accelerate the development, validation, and commercialization of innovative point-of-care and home-based tests, as well as improvements to clinical laboratory tests, that can directly detect SARS-CoV-2, the virus that causes COVID-19. This webinar is designed by the [NIH Point of Care Technology Research Network](#)(POCTRN) to provide relevant information to stakeholders interested in point-of-care technology research and development. [POCTRN's goal](#) is to develop technologies with clinical applications using a network model that enhances complementary strengths and builds multidisciplinary partnerships.

To Join the Webinar: [Registration Website](#)

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Grant Opportunities

National Science Foundation

Grant Program: Computer and Information Science and Engineering (CISE): Core Programs

Agency: National Science Foundation NSF 20-591

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20591/nsf20591.htm>

Brief Description: The NSF CISE Directorate supports research and education projects that develop new knowledge in all aspects of computing, communications, and information science and engineering, as well as advanced cyberinfrastructure, through the following core programs:

Division of Computing and Communication Foundations (CCF):

- Algorithmic Foundations (AF) program;
- Communications and Information Foundations (CIF) program;
- Foundations of Emerging Technologies (FET) program; and
- Software and Hardware Foundations (SHF) program.

Division of Computer and Network Systems (CNS):

- CNS Core (CNS Core) program.

Division of Information and Intelligent Systems (IIS):

- Human-Centered Computing (HCC) program (formerly the Cyber-Human Systems [CHS] program);
- Information Integration and Informatics (III) program; and
- Robust Intelligence (RI) program.

Office of Advanced Cyberinfrastructure (OAC):

- OAC Core Research (OAC Core) program;

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$280,000,000

Proposers are invited to submit proposals in several project classes, which are defined as follows:

- Small Projects -- up to \$500,000 total budget with durations up to three years: projects in this class may be submitted to CCF, CNS, and IIS;
- Medium Projects -- \$500,001 to \$1,200,000 total budget with durations up to four years: projects in this class may be submitted to CCF, CNS, and IIS only; and
- OAC Core Projects -- up to \$500,000 total budget with durations up to three years: projects in this class may be submitted to OAC only.

Letters of Intent: Not required

Proposal Submission Deadline:

October 28, 2020 - November 12, 2020

MEDIUM Projects

October 28, 2020 - November 12, 2020

OAC Core Projects

Proposals Accepted Anytime beginning October 1st, 2020

SMALL Projects

Contacts: Tracy J. Kimbrel, Point of Contact, Algorithmic Foundations (AF), telephone: (703) 292-8910, email: ccf-af@nsf.gov

- Phillip A. Regalia, Point of Contact, Communications and Information Foundations (CIF), telephone: (703) 292-8910, email: ccf-cif@nsf.gov
- Mitra Basu, Point of Contact, Foundations of Emerging Technologies (FET), telephone: (703) 292-8910, email: ccf-fet@nsf.gov

Grant Program: Louis Stokes Alliances for Minority Participation (LSAMP)

Agency: National Science Foundation NSF 20-590

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20590/nsf20590.htm>

Brief Description: The Louis Stokes Alliances for Minority Participation (LSAMP) program is an alliance-based program. The program's theory is based on the Tinto model for student retention referenced in the 2005 LSAMP program evaluation¹. The overall goal of the program is to assist universities and colleges in diversifying the nation's science, technology, engineering and mathematics (STEM) workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in these disciplines: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. LSAMP's efforts to increase diversity in STEM are aligned with the goals of the Federal Government's five-year strategic plan for STEM education, *Charting a Course for Success: America's Strategy for STEM Education*.

The LSAMP program takes a comprehensive approach to student development and retention. Particular emphasis is placed on transforming undergraduate STEM education through innovative, evidence-based recruitment and retention strategies, and relevant educational experiences in support of racial and ethnic groups historically underrepresented in STEM disciplines.

The LSAMP program also supports knowledge generation, knowledge utilization, assessment of program impacts and dissemination activities. The program seeks new learning and immediate diffusion

of scholarly research into the field. Under this program, funding for STEM educational and broadening participation research activities could include research to develop new models in STEM engagement, recruitment and retention practices for all critical pathways to STEM careers or research on interventions such as mentoring, successful learning practices and environments, STEM efficacy studies, and use of technology to improve learning or student engagement.

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$10,000,000

Letters of Intent: Not required

Proposal Submission Deadline: November 20, 2020

Contacts: LSAMP Program Team, telephone: (703) 292-8640, fax: (703) 292-9018, email: LSAMP_national@nsf.gov

- A. James Hicks, Co-Lead/Program Director, telephone: (703) 292-4668, email: ahicks@nsf.gov
 - Martha James, Co-Lead/Program Officer, telephone: (703) 292-7772, email: mjames@nsf.gov
-

Grant Program: Division of Materials Research: Topical Materials Research Programs: Biomaterials (BMAT), Condensed Matter Physics (CMP), Metals and Metallic Nanostructures (MMN), Polymers (POL) (DMR-TMRP BMAT, CMP, MMN, POL)

Agency: National Science Foundation NSF 20-589

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20589/nsf20589.htm>

Brief Description: Research supported by the Division of Materials Research (DMR) focuses on advancing fundamental understanding of materials, materials discovery, design, synthesis, characterization, properties, and materials-related phenomena. DMR awards enable understanding of the electronic, atomic, and molecular structures, mechanisms, and processes that govern nanoscale to macroscale morphology and properties; manipulation and control of these properties; discovery of emerging phenomena of matter and materials; and creation of novel design, synthesis, and processing strategies that lead to new materials with unique characteristics. These discoveries and advancements transcend traditional scientific and engineering disciplines. The Division supports research and education activities in the United States through funding of individual investigators, teams, centers, facilities, and instrumentation. Projects supported by DMR are essential for the development of future technologies and industries that meet societal needs, as well preparation of the next generation of materials researchers.

This solicitation applies to the following four DMR Topical Materials Research Programs that fund research and educational projects by individual investigators or small groups: Biomaterials (BMAT), Condensed Matter Physics (CMP), Metals and Metallic Nanostructures (MMN), and Polymers (POL). It does not apply to the following four DMR Topical Materials Research Programs, which have their own solicitations: Ceramics (CER), Electronic and Photonic Materials (EPM), and Solid State and Materials Chemistry ([NSF 20-588](#)) and Condensed Matter and Materials Theory (CMMT) ([NSF 20-582](#)).

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$38,000,000

Letters of Intent: Not required

Proposal Submission Deadline:

October 01, 2020 - November 02, 2020

Contacts: Randy Duran, Biomaterials (BMAT), telephone: (703) 292-5326, email: rduran@nsf.gov

- Steve Smith, Biomaterials (BMAT), telephone: (703) 292-8158, email: sjsmith@nsf.gov
 - Tomasz Durakiewicz, Condensed Matter Physics (CMP), telephone: (703) 292-4892, email: tdurakie@nsf.gov
-

Grant Program: Division of Materials Research: Topical Materials Research Programs: Ceramics (CER), Electronic and Photonic Materials (EPM), Solid State and Materials Chemistry (SSMC) (DMR-TMRP CER, EPM, SSMC)

Agency: National Science Foundation NSF 20-588

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20588/nsf20588.htm>

Brief Description: Research supported by the Division of Materials Research (DMR) focuses on advancing fundamental understanding of materials, materials discovery, design, synthesis, characterization, properties, and materials-related phenomena. DMR awards enable understanding of the electronic, atomic, and molecular structures, mechanisms, and processes that govern nanoscale to macroscale morphology and properties; manipulation and control of these properties; discovery of emerging phenomena of matter and materials; and creation of novel design, synthesis, and processing strategies that lead to new materials with unique characteristics. These discoveries and advancements transcend traditional scientific and engineering disciplines. The Division supports research and education activities in the United States through funding of individual investigators, teams, centers, facilities, and instrumentation. Projects supported by DMR are essential for the development of future technologies and industries that meet societal needs, as well preparation of the next generation of materials researchers. This solicitation applies to the following three DMR Topical Materials Research Programs that fund research and educational projects by individual investigators or small groups: Ceramics (CER), Electronic and Photonic Materials (EPM), and Solid State and Materials Chemistry (SSMC). It does not apply to the following five DMR Topical Materials Research Programs, which have their own solicitations: Biomaterials (BMAT), Condensed Matter Physics (CMP), Metals and Metallic Nanostructures (MMN), and Polymers (POL) ([NSF 20-589](#)), and Condensed Matter and Materials Theory (CMMT) ([NSF 20-582](#)).

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$28,000,000

Letters of Intent: Not required

Proposal Submission Deadline: Proposals Accepted Anytime

Contacts: Lynnette D. Madsen, Ceramics (CER), telephone: (703) 292-4936, email: lmadsen@nsf.gov

- James H. Edgar, Electronic and Photonic Materials (EPM), telephone: (703) 292-2053, email: jedgar@nsf.gov
- Robert L. Opila, Electronic and Photonic Materials (EPM), telephone: (703) 292-7812, email: robopila@nsf.gov

Grant Program: Graduate Research Fellowship Program (GRFP)

Agency: National Science Foundation NSF 20-587

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20587/nsf20587.htm>

Brief Description: The purpose of the NSF Graduate Research Fellowship Program (GRFP) is to help ensure the quality, vitality, and diversity of the scientific and engineering workforce of the United States. The program recognizes and supports outstanding graduate students who are pursuing full-time research-based master's and doctoral degrees in science, technology, engineering, and mathematics (STEM) or in STEM education. The GRFP provides three years of support for the graduate education of individuals who have demonstrated their potential for significant research achievements in STEM or STEM education. NSF actively encourages women, members of underrepresented minority groups, persons with disabilities, veterans, and undergraduate seniors to apply.

Applicants must self-certify that they are eligible to receive the Fellowship. To be eligible, an applicant must meet all of the following eligibility criteria by the application deadline:

- Be a U.S. citizen, national, or permanent resident

- Intend to enroll or be enrolled full-time in a research-based master's or doctoral degree program in an eligible Field of Study in STEM or STEM education (See Appendix and Section IV.3 for eligible Fields of Study)
- Have never previously accepted a Graduate Research Fellowship
- If previously offered a Graduate Research Fellowship, have declined by the acceptance deadline
- Have never previously applied to GRFP while enrolled in a graduate degree program
- Have never earned a doctoral or terminal degree in any field
- Have never earned a master's or professional degree (see joint bachelor's-master's degree information below) in any field, or completed more than one academic year in a graduate degree-granting program, **unless (i) returning to graduate study after an interruption of two (2) or more consecutive years immediately preceding the application deadline, and; (ii) are not enrolled in a graduate degree program at the application deadline**
- Not be a current NSF employee
- Undergraduate seniors and bachelor's degree holders who have never enrolled in a graduate degree program have no restrictions on the number of times they can apply before enrolling in a degree-granting graduate program.
- Graduate students enrolled in a degree-granting graduate program are limited to only **one** application to the GRFP, submitted in the first year or beginning of the second year of their degree program.

Awards: Fellowship; The NSF expects to award 1,600 Graduate Research Fellowships per fiscal year under this program solicitation pending availability of funds. Each Fellowship provides three years of support during a five-year fellowship period. For each of the three years of support, NSF provides a \$34,000 stipend and \$12,000 cost of education allowance to the graduate degree-granting institution of higher education for each Fellow who uses the support in a fellowship year.

Letters of Intent: Not required

Proposal Submission Deadline:

October 19, 2020

Life Sciences

October 20, 2020

Computer and Information Science and Engineering, Materials Research, Psychology, Social Sciences, STEM Education and Learning

October 21, 2020

Engineering

October 22, 2020

Chemistry, Geosciences, Mathematical Sciences, Physics and Astronomy

Contacts: Applications contact: GRF Operations Center, telephone: (866) 673-4737, email: info@nsfgrfp.org

- Jong-on Hahm, Ph.D., Program Director, telephone: (866) 673-4737, email: info@nsfgrfp.org

- Christopher Hill, Ph.D., Program Director, telephone: (866) 673-4737, email: info@nsfgrfp.org

Grant Program: Re-entry to Active Research Program (RARE)

Agency: National Science Foundation NSF 20-586

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20586/nsf20586.htm>

Brief Description: The Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET) and the Division of Chemistry (CHE) are conducting a Re-entry to Active Research (RARE) program to reengage, retrain, and broaden participation within the academic workforce. The primary objective of the RARE program is to catalyze the advancement along the academic tenure-track of highly

meritorious individuals who are returning from a hiatus from active research. By providing re-entry points to active academic research, the RARE program will reinvest in the nation's most highly trained scientists and engineers, while broadening participation and increasing diversity of experience. A RARE research proposal must describe potentially transformative research that falls within the scope of participating [CBET or CHE programs](#).

The RARE program includes two Tracks to catalyze the advancement of investigators along the academic tenure system after a research hiatus, either to a tenure-track position or to a higher-tenured academic rank. Track 1 of the RARE program reengages investigators in a competitive funding opportunity with accommodations for gap in record that are a result of the research hiatus. A Track 1 proposal will follow the budgetary guidelines of the relevant CBET program for an unsolicited research proposal or the relevant CHE Disciplinary Research program. Track 2 retrains investigators for whom the research hiatus has led to the need for new or updated techniques, such that retraining is required to return the investigator to competitive research activity. A description of how these new techniques will lead to competitive research in CBET or CHE programs is required. A Track 2 proposal budget will include only funds necessary for specific retraining activities, such as travel to a workshop or conference, workshop registration fees, a retraining sabbatical, or seed funding to support collection of preliminary data (including salary support, equipment usage fees, materials, and/or supplies).

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$2,400,000

Letters of Intent: Not required

Proposal Submission Deadline: Proposals Accepted Anytime

Contacts: General inquiries regarding this program should be made to:

RAREquestions@NSF.GOV or a RARE Program Officer listed below.

- Carole Read, CBET, telephone: (703) 292-2418, email: cread@nsf.gov
- Steven W. Peretti, CBET, telephone: (703) 292-7029, email: speretti@nsf.gov
- Nora F. Savage, CBET, telephone: (703) 292-7949, email: nosavage@nsf.gov

Grant Program: Ecology and Evolution of Infectious Diseases (EEID)

Agency: National Science Foundation NSF 20-585

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20585/nsf20585.htm>

Brief Description: The multi-agency Ecology and Evolution of Infectious Diseases program supports research on the ecological, evolutionary, and social drivers that influence the transmission dynamics of infectious diseases. The central theme of submitted projects must be the quantitative or computational understanding of pathogen transmission dynamics. The intent is discovery of principles of infectious disease transmission and testing mathematical or computational models that elucidate infectious disease systems. Projects should be broad, interdisciplinary efforts that go beyond the scope of typical studies. They should focus on the determinants and interactions of transmission among any host species, including but not limited to humans, non-human animals, and/or plants. This includes, for example, the spread of pathogens; the influence of environmental factors such as climate; the population dynamics and genetics of reservoir species or hosts; the feedback between ecological transmission and evolutionary dynamics; and the cultural, social, behavioral, and economic dimensions of pathogen transmission. Research may be on zoonotic, environmentally-borne, vector-borne, or enteric pathogens of either terrestrial or aquatic systems and organisms, including diseases of animals and plants, at any scale from specific pathogens to inclusive environmental systems. Proposals for research on disease systems of public health concern to developing countries are strongly encouraged, as are disease systems of concern in agricultural systems. Investigators are encouraged to develop the appropriate multidisciplinary team, including for example, anthropologists, modelers, ecologists, bioinformaticians, genomics researchers, social scientists, economists, oceanographers, mathematical scientists, epidemiologists, evolutionary biologists,

entomologists, parasitologists, microbiologists, bacteriologists, virologists, pathologists or veterinarians, with the goal of integrating knowledge across disciplines to enhance our ability to predict and control infectious diseases.

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$24,000,000

Letters of Intent: Not required

Proposal Submission Deadline: November 18, 2020

Contacts: Katharina Dittmar, Program Director, NSF/BIO, telephone: (703) 292-7799, email: kdittmar@nsf.gov

- Christine Jessup, Program Director, NIH/FIC, telephone: (301) 496-1653, fax: (301) 402-0779, email: christine.jessup@nih.gov
 - Mark Mirando, National Program Leader, USDA/NIFA, telephone: (202) 445-5575, email: mark.mirando@usda.gov
-

Grant Program: Research Experiences for Teachers (RET) in Engineering and Computer Science
Agency: National Science Foundation NSF 20-584

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20584/nsf20584.htm>

Brief Description: NSF's Directorate for Engineering (ENG) and the Directorate for Computer and Information Science and Engineering (CISE) have joined to support the Research Experiences for Teachers (RET) in Engineering and Computer Science program. This program supports active long-term collaborative partnerships between K-12 Science, Technology, Engineering, Computer and Information Science, and Mathematics (STEM) in-service and pre-service teachers, full-time community college faculty, university faculty and students, and industry partners to enhance the scientific disciplinary knowledge and capacity of the STEM teachers and/or community college faculty through participation in authentic summer research experiences with engineering and computer science faculty researchers. The research projects and experiences all revolve around a focused research area related to engineering and/or computer science that will provide a common cohort experience to the participating educators. The K-12 STEM teachers and/or full-time community college faculty also translate their research experiences and new scientific knowledge into their classroom activities and curricula. The university team will include faculty, graduate and undergraduate students as well as industrial advisors. As part of the long-term partnership arrangements, involvement of undergraduate/graduate students with the integration of the RET curricular materials into classroom activities is particularly encouraged.

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$5,800,000

Letters of Intent: Not required

Proposal Submission Deadline: September 30, 2020

Contacts: Amelia S. Greer, ENG/EEC, telephone: (703) 292-2552, email: agreer@nsf.gov

- Allyson Kennedy, CISE/CNS, telephone: (703) 292-8950, email: aykenned@nsf.gov
-

Grant Program: Disaster Resilience Research Grants (DRRG)

Agency: National Science Foundation NSF 20-581

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20581/nsf20581.htm>

Brief Description: With this joint solicitation, the NSF and the U.S Department of Commerce (DOC) National Institute for Standards and Technology (NIST) call for proposals for research to advance fundamental understanding of disaster resilience in support of improved, science-based planning, policy, decisions, design, codes, and standards.

Awards: Standard or continuing grants; **Anticipated Funding Amount:** \$3,100,000

Letters of Intent: August 14, 2020

Proposal Submission Deadline: September 15, 2020

Contacts: Jacqueline R. Meszaros, ENG/CMMI, telephone: (703) 292-7261, email: jmeszaro@nsf.gov

- Jason Averill, Chief, MSS Div, ENG Lab, NIST, telephone: (301)975-2585, email: jason.averill@nist.gov

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National Institutes of Health

Grant Program: Ethical, Legal and Social Implications (ELSI) Exploratory/Developmental Research Grant (R21 Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-255

Companion Opportunities:

[PAR-20-254](#), [R01](#) Research Project Grant

[PAR-20-257](#), [R03](#) Small Grant Program

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-255.html>

Brief Description: The NINDS is interested in research that addresses ethical, legal, and social issues for individuals and communities that emerge from human genome research in the domain of NINDS's core mission and the topics and disorders for which NINDS serves as a primary lead at the NIH. Please visit: <https://www.ninds.nih.gov/About-NINDS>. Areas of interest specific to NINDS include but are not limited to the ethical, legal, and social implications of: aspects of neurogenetic research with human participants, such as differing stakeholder views on return of research results to participants or patient consent-related issues; neurogenetic research with human brain tissue; collecting and sharing human neurogenetic data, such as de-identification, privacy, and re-use practices; predictive/diagnostic neurogenetic research related to brain disorders; management and understanding of uncertain individual neurogenetic research results and secondary findings; and issues pertaining to neurogenetic research with children, patients with rare diseases, and other vulnerable populations.

Awards: Application budgets are limited to a combined total of no more than \$275,000 in direct costs for the two year project, with no more than \$200,000 in direct costs in a single year

Letter of Intent: Not applicable

Proposal Submission Deadline: New Application Due Dates: October 19 2020, February 17 2021, June 17 2021, October 19 2021, February 17 2022, June 17 2022, October 19 2022, February 17 2023, June 19 2023. Resubmission and Revision Due Dates: November 17 2020, March 17 2021, July 19 2021, November 17 2021, March 17 2022, July 19 2022, November 17 2022, March 17 2023, July 19 2023

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

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

Contact: Joy Boyer, National Human Genome Research Institute (NHGRI), Telephone: 301-402-4997
Email: boyerj@mail.nih.gov

Grant Program: Senator Paul D. Wellstone Muscular Dystrophy Specialized Research Centers (MDSRC) (P50 Clinical Trial Optional)

Agency: National Institutes of Health RFA-AR-21-008

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-AR-21-008.html>

Brief Description: The purpose of this Funding Opportunity Announcement (FOA) is to solicit applications for Senator Paul D. Wellstone Muscular Dystrophy Specialized Research Centers (MDSRCs). These Centers promote collaborative basic, translational and clinical research and provide important resources that can be used by the national muscular dystrophy research community. A goal of this Centers program is to support important and innovative research in the muscular dystrophies that is best pursued through this interdisciplinary and collaborative Center environment, and projects that may not be as effective if supported by "stand-alone" research project grants. The Centers also provide outstanding environments for the training of new scientists electing to pursue careers conducting research in high priority areas of muscular dystrophy. Finally, Center investigators are expected to engage the patient and advocacy communities in conversations to increase awareness of research, encourage patient participation in research and incorporate the perspectives of these communities in the conduct of patient-centered research.

Awards: Applicants may request up to \$1,000,000 direct costs/year (exclusive of facilities and administrative costs of subcontractors with collaborating organizations).

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

Proposal Submission Deadline: October 19, 2020

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: Emily Carifi, Ph.D., National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), Telephone: 301-496-0665, Email: Emily.Carifi@nih.gov

Grant Program: Harnessing Data Science for Health Discovery and Innovation in Africa (DS-I Africa) Open Data Science Platform and Coordinating Center (U2C – Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-RM-20-018

Companion Opportunities:

[RFA-RM-20-015](#) Specialized Center – Cooperative Agreements

[RFA-RM-20-016](#) International Research Training Cooperative Agreements

[RFA-RM-20-017](#) Research Project – Cooperative Agreements

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-20-018.html>

Brief Description: The DS-I Africa Open Data Science Platform and Coordinating Center FOA will consist of two components – the DS-I Africa Open Data Science Platform (ODSP) and Coordinating Center (CC) – funded via one U2C award.

The ODSP will be a scalable data-sharing gateway available to the research community with access to disparate types of open and controlled-access data, generated from the DS-I Africa Research Hubs (see Companion Funding Opportunities) as well as other existing sources. The ODSP will enable discovery and harness the collective data into actionable insights that individual researchers and health care professionals would not easily be able to develop with only the data generated from their own studies – democratizing access to and use of data through the use of FAIR (Findable, Accessible, Interoperable, Reusable) principles. The ODSP will also provide a core set of tools that enable cross-network projects and have the ability to deploy computational pipelines, workflows, and analyses developed by the Research Hub investigators and other users to analyze their own data in conjunction with other data accessible via the ODSP. The awardee will serve as a technical resource for the DS-I Africa Consortium to support relevant use cases including system capabilities to comply with international data protection and anonymization requirements. The awardee is also expected to foster collaborations with industry to leverage existing technologies and solutions that are cost-effective and sustainable.

The CC will be responsible for managing cross-consortium administrative functions, including engagement and communications across the consortium and among participants in all DS-I Africa elements (Working Groups, Steering Committee, DS-I Africa staff and external advisory groups/stakeholders and the public). The CC will also disseminate information about the consortium and facilitate working groups and semi-annual consortium meetings. In addition, the CC will work in close partnership with the ODSP to coordinate data science or related short-courses (online and in-person) and other training activities and establish a web presence for the consortium.

Awards: \$2,250,000 total costs per year

Letter of Intent: November 3, 2020

Proposal Submission Deadline: December 3, 2020

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: Tiffani Bailey Lash, Ph.D., National Institute for Biomedical Imaging and Bioengineering (NIBIB), Telephone: 301-496-4778, Email: DS-I_AfricaFOA-Inqry@mail.nih.gov

Grant Program: BRAIN Initiative: Tools for Germline Gene Editing in Marmosets (U01 - Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-DA-21-006

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-21-006.html>

Brief Description: This Funding Opportunity Announcement (FOA) solicits applications to develop tools and technologies to routinely conduct germline and somatic transgenic studies and gene editing in the common marmoset with the aim of supporting the BRAIN goals of understanding the brain in health and disease. This includes optimization of strategies, tools, and methods to build a scientifically rigorous, ethical, efficient, and cost-effective brain-specific research infrastructure that can support all aspects of gene editing in marmosets, including optimizing assisted reproductive technologies, embryonic stem cell culture, ovarian stimulation protocols, development of pre-implantation protocols, standardization of semen collection and freezing, developing molecular genetic tools for gene editing and inducible/tissue-specific studies, creation of CRE driver lines, etc. Awardees are expected to participate in and provide information to an NIH-Funded Marmoset Coordination Center to disseminate the tools to the broader marmoset community. Studies proposing to conduct gene editing must contain at least one germline gene editing component.

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

Letter of Intent: 30 days prior to application due date

Proposal Submission Deadline: October 15, 2020 and October 14, 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.

Grant Program: Integrative Research to Understand the Impact of Sex Differences on the Molecular Determinants of AD Risk and Responsiveness to Treatment (R01 Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-269

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-269.html>

Brief Description: This FOA invites applications that employ integrative experimental and analytical approaches engaging basic and translational/clinical research aimed at developing a comprehensive understanding of the impact of sex differences on the trajectories of brain aging and disease, phenotypes of AD and AD-related dementias (ADRD) risk, individualized prevention, and responsiveness to pharmacologic and non-pharmacologic interventions. To this end, this funding opportunity encourages research focused on, but not limited to, the following:

- Molecular mechanisms underlying sex differences in brain bioenergetics, blood-brain barrier (BBB) and neurovascular unit function, myelin integrity, synaptic plasticity, and neural circuits integrity as they relate to the transition from healthy to pathologic brain aging/neurodegeneration.
- Molecular mechanisms by which sex differences influence differential vulnerability to metabolic, vascular, and inflammatory risk factors.
- The impact of sex differences on the trajectories of brain aging and on the molecular determinants of AD risk and progression across diverse ethnic groups.
- Molecular mechanisms by which hormonal transition states, i.e., perimenopause, menopause, and andropause, influence the heterogeneity of AD risk and AD progression.
- Understanding how sex interacts with different ApoE genotypes to influence the molecular mechanisms of brain aging, AD risk phenotypes, and responsiveness to treatment.
- Molecular determinants of sex differences in responsiveness to pharmacologic and non-pharmacologic treatment of AD/ADRD.

The central goal of this initiative is to develop robust research programs that will explore how genes, environment, and hormonal status (gonadal and brain-derived) interact at various levels of biologic complexity (cell, tissue, organs/organ systems, and populations) to produce heterogeneous phenotypes of disease risk and responsiveness to therapy in AD/ADRD.

A cross-disciplinary team-science approach that brings together experts in neuroscience, physiology, computational biology and data science, and translational and clinical research is strongly encouraged, as is the integrative use of human data and biosamples with cell-based and animal models. This FOA will *not* support research that relies solely on the use of cell-based and animal models.

Awards: Annual direct costs are capped at \$750,000.

Letter of Intent: October 10, 2020

Proposal Submission Deadline: November 10, 2020

No late applications will be accepted for this Funding Opportunity Announcement.

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: Jean Yuan, Ph.D., National Institute on Aging (NIA), Telephone: 301-496-9350

Email: yuanx4@mail.nih.gov

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Department of Defense/US Army/DARPA/ONR/AFOSR

Grant Program: Verified Security and Performance Enhancement of Large Legacy Software (V-SPELLS)

Agency: Department of Defense DARPA - Information Innovation Office HR001120S0058

Website: <https://beta.sam.gov/opp/7dc5798bf5e74d8aa3df767edd3e0815/view>

Brief Description: The goal of the V-SPELLS program is to create a developer-accessible capability for piece-by-piece enhancement of software components with new verified code that is both correct-by-construction and compatible-by-construction, i.e., safely composable with the rest of the system. V-SPELLS will create practical tools for developers to gain benefits of formal software verification in incremental software (re)engineering rather than only in clean-slate introduction. V-SPELLS tools will enable developers to deliver assured incremental modernization of legacy systems in a manner that leverages verification technologies and reduces rather than raises risk. V-SPELLS aims to radically broaden adoption of software verification by enabling incremental introduction of superior technologies into systems that cannot be re-designed from scratch and replaced as a whole.

Awards: There are multiple technical areas for this solicitation. Currently, DARPA anticipates multiple awards in Technical Area 1, Technical Area 2 and Technical Area 3; and a single award for Technical Area 4. DARPA anticipates making multiple awards under this BAA, which has a total anticipated funding amount of approximately \$40 million.

Letter of Intent: Not Required

Proposal Deadline: September 9, 2020, 12:00 noon (ET)

Proposers Day: July 29, 2020

Contact Information: Dr. Sergey Bratus, Program Manager, DARPA/I2O

Grant Program: DoD Combat Readiness, Rapid Development and Translational Research Award
Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-20-S-CRRP

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328340>

Brief Description: The CRRP vision is to deliver high-impact medical solutions throughout the continuum of care to increase survivability and readiness of the Warfighter in diverse operational settings. The program seeks to develop innovative solutions to increase medical readiness, mitigate fatalities, optimally treat life-threatening injuries, and promote positive long-term outcomes. While the CRRP focuses on capability gaps in frontline care, the program also considers how chronic disorders typically associated with pre-deployment readiness (e.g., sleep, gastrointestinal conditions) may influence the delivery of care in deployed environments and contribute to injury susceptibility and recovery. Innovations developed by CRRP-supported research may be applied proactively as a way to establish medical readiness ahead of deployment, in-theater at the point of injury or during periods of prolonged care, or during transport/en route care within and from theater to hospital settings. These solutions will not only help to minimize the morbidity and mortality of combat-related injuries sustained by the Warfighter, they will also often translate to civilian care.

Awards: The anticipated total costs budgeted for the entire period of performance for an FY20 CRRP RDTRA will not exceed \$2M.

Letter of Intent: Pre-Proposal Required

Proposal Deadline: Pre-Proposal/Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), September 10, 2020 • Invitation to Submit an Application: October 16, 2020 • Proposal/Application Submission Deadline: 11:59 p.m. ET, December 3, 2020

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

Grant Program: Award for Fundamental Research in Socio-Mathematics of Information and Influence

Agency: Department of Defense BRO-20-SOMAI

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328111>

Brief Description: The overarching goal of this research program is to enhance and extend the understanding of the theoretical underpinnings of future information warfare, towards rapid detection, tracking and prediction of attempts at social manipulation. The problem requires the deep integration of two, currently distinct scientific fields, mathematics and social sciences. While modern mathematical methods are often and well-used in social science studies, this research program is going well beyond the state of the art and is calling for the development of a new mathematical foundation for describing, analyzing and predicting human social behavior at multiple scales and in complex and dynamic environments, thus laying the groundwork for a new field.

Research Areas:

The fundamental science behind the objective of this topic covers multiple, coupled areas, thus requiring a combination of expertise, for example: computer science and machine learning, mathematics, cognitive psychology and sociology, network theory and/or game theory. Some specific research topics to be addressed in this undertaking *may* include, but are not limited to, the following:

- 1) Carefully designed mathematical abstractions based on behavioral science for modeling the agent's psychological and social variables, e.g.: emotional and cognitive states, human intent and belief, and group dynamics. These models should include approaches to multi-scale clustering for accurate comprehension and modeling of aggregate behavior, e.g. individual – group – nation.
- 2) Game-theoretical and Machine Learning concepts, e.g. multi-agent reinforcement learning (RL) or distributional RL, as well as other innovative ideas that can consider a hybrid distribution of irrational and rational agents, including artificial ones (e.g. bots).
- 3) Efficient mathematical methods and algorithms to detect malicious intent and learn agent behavior and objectives from limited and noisy observations.
- 4) Concepts and methods for strategy optimization (inverse design), which may include counter-messaging, network-based intervention, or other means.

Proposals should aim to produce novel conceptual frameworks that present disruptive ways of thinking about the fundamental scientific problems described above. The research is exploratory and can be conducted on publically available data-sets, synthetic data, or real data that can be readily obtained by the performer. Proposals should not rely on the need for data to be supplied by the Government, which does not already exist and is publicly available.

Awards: Proposals may be written in two options, of a maximum budget of \$1.5M each. The options may be consecutive or executed in parallel, and the statement of work and research directions in each option are entirely at the discretion of the proposer. A proposer may choose to submit a proposal that contains only one option. Single option proposals are subject to the budget limitation of \$1.5M.

Letter of Intent: Not Required

Proposal Deadline: August 28, 2020, 4.00 PM

Contact Information: Sharon A Hilton, Grantor sharon.a.hilton.civ@mail.mil

Grant Program: DoD Pancreatic Cancer, Idea Development Award

Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-20-PCARP-IDA

Website: <https://cdmrp.army.mil/funding/pa/FY20-PCARP-IDA.pdf>

Brief Description: Applications to the Fiscal Year 2020 (FY20) Pancreatic Cancer Research Program (PCARP) are being solicited for the Defense Health Agency (DHA) J9, Research and Development Directorate. To be considered for funding, applications for the FY20 PCARP Idea Development Award must address at least one of the FY20 PCARP Focus Areas. • Understanding precursors, origins, and early progression of pancreatic cancer • Understanding the events that promote pancreatic cancer metastasis • Understanding the relationship between oncogenic signaling and the tumor

microenvironment that drives drug resistance and therapeutic response • Integration of biologic and imaging biomarkers to drive more precise and earlier detection and prognosis • Defining viable tumor burden • Supportive care and patient-reported outcomes, quality of life, and perspectives during treatment and survivorship • New drug development targeted toward cancer sensitivity and resistance mechanisms including immune mechanisms of resistance • Development of pharmacological, immunological, or genetic interception approaches

Awards: The FY20 appropriation is \$6 million (M).

Letter of Intent: Not Required

Proposal Deadline: Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), August 25, 2020

• Invitation to Submit an Application: September 30, 2020 • Application Submission Deadline: 11:59 p.m. ET, November 20, 2020

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

Grant Program: Defense Sciences Office Office-wide

Agency: Department of Defense DARPA - Defense Sciences Office HR001120S0048

Website: <https://beta.sam.gov/opp/36d6bc789b364142a0f7a267017b06d9/view>

Brief Description: The mission of the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is to identify and create the next generation of scientific discovery by pursuing high-risk, high-payoff research initiatives across a broad spectrum of science and engineering disciplines and transforming these initiatives into disruptive technologies for U.S. national security. In support of this mission, the DSO Office-wide BAA invites proposers to submit innovative basic or applied research concepts or studies and analysis proposals that address one or more of the following technical thrust areas: (1) Frontiers in Math, Computation and Design, (2) Limits of Sensing and Sensors, (3) Complex Social Systems, and (4) Anticipating Surprise. Each of these thrust areas is described below and includes a list of example research topics that highlight several (but not all) potential areas of interest. Proposals must investigate innovative approaches that enable revolutionary advances. DSO is explicitly not interested in approaches or technologies that primarily result in evolutionary improvements to the existing state of practice.

Awards: Multiple awards are anticipated; however, the level of funding for individual awards made under this solicitation has not been predetermined and will depend on the scope and quality of the proposals received, as well as the availability of funds.

Proposal Deadline: Executive Summary Due Date and Time: Executive Summaries may be submitted on a rolling basis until Executive Summary Due Date: June 11, 2021, 4:00 p.m. o Proposal Abstract Due Date and Time: Abstracts may be submitted on a rolling basis until June 11, 2021, 4:00 p.m. o FAQ Submission Deadline: June 2, 2021, 4:00 p.m. See Section VIII.A. o Full Proposal Due Date and Time: Proposals may be submitted on a rolling basis until June 11, 2021, 4:00 p.m

Contact Information: Phil Root, Deputy Director, DARPA/DSO o BAA Email: HR001120S0048@darpa.mil

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

Agency: Department of Defense Naval Information Warfare Center Pacific N66001-20-S-4702

Website: <https://www.grants.gov/web/grants/search-grants.html>

Brief Description: Naval Information Warfare Center, Pacific (NIWC Pacific), is soliciting proposals in accordance with FAR 35.016, DoDGARS 22.315(a), and DoD Other Transactions (OT) Guide for

Prototype Projects for research in areas relating to the advancement of C4ISR capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems. Submissions in response to this announcement shall be for areas relating to the advancement of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems.

Proposed research should investigate unique and innovative approaches for defining and developing next generation integratable C4ISR capabilities and command suites. The area topics reflect the interest of the NIWC Pacific, but interest from other Team NAVWAR components could be generated and selections could be made for funding by other than NIWC Pacific. Only offers that are in the areas of basic research, applied research, advanced technology development, and advanced component development and prototypes will be considered (see Appendix A). Testing and optimizing of concepts or prototypes may be necessary. This may involve virtual simulation and/or laboratory as well as at sea measurements.

Awards: Multiple awards are anticipated

Proposal Deadline: This announcement is open for 365 days from the original posting date. Any white papers received during that time shall only be considered for award of a contract, other transaction, grant, or cooperative agreement. Closing date; June 03, 2021

Contact Information: 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

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Department of Transportation

Grant Program: Advanced Transportation and Congestion Management Technologies Deployment Initiative

Agency: Department of Transportation 693JJ320NF00010

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

Brief Description: The DOT hereby requests applications to result in awards to eligible entities to develop model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of: • reduced traffic-related fatalities and injuries; • reduced traffic congestion and improved travel time reliability; • reduced transportation-related emissions; • optimized multimodal system performance; • improved access to transportation alternatives, including for underserved populations; • public access to real time integrated traffic, transit, and multimodal transportation information to make informed travel decisions; • cost savings to transportation agencies, businesses, and the traveling public; or • other benefits to transportation users and the general public. This competitive ATCMTD Grant Program will promote the use of innovative transportation solutions. The deployment of these technologies will provide Congress and DOT with valuable real-life data and feedback to inform future decision-making.

Letter of Intent: Not Required

Proposal Deadline: August 31, 2020

Contact Information: Submit Questions to: ATCMTD@dot.gov

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Department of Agriculture:

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](#)

Grant Program: Biotechnology Risk Assessment Grants Program

Agency: Department of Agriculture USDA-NIFA-BRAP-007072

Website: <https://nifa.usda.gov/funding-opportunity/biotechnology-risk-assessment-research-grants-program-brag>

Brief Description: The purpose of the BRAG program is to support the generation of new information that will assist Federal regulatory agencies in making science-based decisions about the effects of introducing into the environment genetically engineered organisms (GE), including plants, microorganisms — such as fungi, bacteria, and viruses — arthropods, fish, birds, mammals and other animals excluding humans. Investigations of effects on both managed and natural environments are relevant. The BRAG program accomplishes its purpose by providing federal regulatory agencies with scientific information relevant to regulatory issues. See the Request for Applications (RFA) for details. [View the Centers of Excellence \(COE\) webpage](#) to access a factsheet on the COE designation process, including COE criteria, and a list of programs offering COE opportunities.

Awards: Up to \$500,000; Anticipated available funding: \$4,500,000

Proposal Deadline: Mar 18, 2020 FY 2020: March 18, 2020 FY 2021: February 24, 2021 Letter of Intent Deadline: February 12, 2020; January 21, 2021 Note: Letter of Intent encouraged but not required

Contact Information: Dr. Lakshmi Matukumalli lakshmi.matukumalli@usda.gov (816)-926-1189

Grant Program: REAP-Renewable Energy Systems and Energy Efficiency Improvements

Agency: Department of Agriculture RDBCP-11-REAP-RES-EEI-2020

Website: <https://www.govinfo.gov/content/pkg/FR-2019-08-30/pdf/2019-18825.pdf>

Brief Description: Eligible applicants are agricultural producers and rural small businesses. All agricultural producers, including farmers and ranchers, who gain 50% or more of their gross income from the agricultural operations are eligible. Small businesses that are located in a rural area can also apply. Rural electric cooperatives may also be eligible to apply. Additional Information on Eligibility: Citizenship - To be eligible, applicants must be individuals or entities at least 51 percent owned by persons who are either: 1) citizens of the United States (U.S.), the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, or American Samoa; or 2) legally admitted

permanent residents residing in the U.S. Project - The project must be to conduct a feasibility study for a renewable energy system. Eligible technologies include: projects that produce energy from wind, solar, biomass, geothermal, hydro power and hydrogen-based sources.

Awards: Up to \$500,000; Anticipated Funding: \$70 million

Submission Deadline: September 30, 2020

Contact: **Technical Contact:** Maureen Hessel, Energy Specialist, Phone 202-401-0142

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Department of Labor

Grant Program: Supply Chains Tracing Project

Agency: Department of Labor FOA-ILAB-20-04

Website: <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328321>

Brief Description: The Bureau of International Labor Affairs (ILAB), U.S. Department of Labor (USDOL, or the Department), announces the availability of approximately \$8,000,000 total costs (subject to the availability of federal funds) for up to two cooperative agreements of up to \$4,000,000 total costs each to fund technical assistance projects to increase the downstream tracing of goods made by child labor or forced labor. 1 Project outputs include (1) increasing the number of tested supply chain tracing methodologies; (2) increasing the number of piloted tools for supply chain tracing; and (3) increasing the dissemination of supply chain tracing tools and methodologies to a broad range of stakeholders.

Awards: The duration of the project will be a maximum of 4.5 years (54 months) from the effective date of the award. If applying for both cooperative agreements, applicants may not combine applications into one—they must submit separate applications. Each application should request no more than \$4,000,000 total costs in funding and each application must separately meet all the requirements of this announcement. In the event that the same applicant is selected for award for both cooperative agreements, USDOL reserves the right to issue one cooperative agreement covering both proposals, and to adjust the budget accordingly for administrative costs.

Proposal Deadline: : The closing date for receipt of applications under this announcement is September 8, 2020. Applications must be received no later than 4:00:00 p.m. Eastern Time.

Contact Information: Sue Levenstein, Grants Management Specialist. levenstein.susan.l@dol.gov

Grant Program: Women in Apprenticeship and Nontraditional Occupations (“WANTO”) Technical Assistance Grant Program

Agency: Department of Labor FOA-WB-20-01

Website: <https://www.grants.gov/web/grants/search-grants.html>

Brief Description: This program aims to provide technical assistance (TA) to employers and labor unions to encourage employment of women in both apprenticeable occupations and nontraditional occupations (A/NTO), specifically in the following ways: • Developing (establishing, expanding, and/or enhancing) pre-apprenticeship, apprenticeship (includes Registered Apprenticeship Programs, Industry-Recognized Apprenticeship Programs, and other apprenticeship programs), or other nontraditional skills training programs designed to prepare women for careers in A/NTO; • Providing ongoing orientations or other resources for employers, unions, and workers on creating a successful environment for women in A/NTO; and/or • Setting up support groups, facilitating networks, and/or providing supportive services (as defined in section IV.E.3) for women in A/NTO to improve their retention.

Awards: Up to \$750,000; Estimated Total Program Funding: \$4,100,000

Proposal Deadline: August 3, 2020

Contact Information: Marc Purvis Grants Management Specialist purvis.marc@dol.gov

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EPA

Grant Program: FY2021 Environmental Workforce Development and Job Training (EWDJT) Grants

Agency: Environmental Protection Agency EPA-OLEM-OBLR-20-03

Website: <https://www.epa.gov/grants/fy2021-environmental-workforce-development-and-job-training-ewdjt-grants>

Brief Description: This notice announces the availability of funds and solicits applications from eligible entities, including nonprofit organizations, to deliver Environmental Workforce Development and Job Training programs that recruit, train, and place local, unemployed and under-employed residents with the skills needed to secure full-time employment in the environmental field. While Environmental Workforce Development and Job Training Grants require training in brownfield assessment and/or cleanup activities, these grants also require that Hazardous Waste Operations and Emergency Response (HAZWOPER) training be provided to all individuals being trained. EPA encourages applicants to develop their curricula based on local labor market assessments and employers' hiring needs, while also delivering comprehensive training that results in graduates securing multiple certifications.

Award: The total funding available under this competitive opportunity for FY 21 is approximately \$3,000,000,

Submission Deadline: The closing date and time for receipt of applications is SEPTEMBER 22, 2020, 11:59 p.m. ET.

Contact: Channing Shepherd, (202) 566-1238 and See Section VII of announcement.

[Channing Shepherd](#)

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Department of Energy

Grant Program: American-Made Solar Prize

Agency: Department of Energy National Renewable Energy Lab (NREL)

Website: <https://www.herox.com/solarprizeround4>

Brief Description: The American-Made Solar Prize is a \$3M competition organized by NREL to revitalize the US ecosystem of innovators and entrepreneurs in solar. Our goal is to rapidly develop new solar solutions and bring them to market.

The Solar Prize is an opportunity for anyone interested in accelerating ideas and solutions. The American-Made Network is designed to strengthen and scale the very best ideas and teams through three progressive prize competitions, the Ready! Set! Go! Contests. This network provides the tools and expertise to help projects succeed and is comprised of an unparalleled innovation system. These resources will provide technical insight, product validation, and strategic support to teams throughout the competition. **Competing in the prize is easy!**

1. Identify an important problem you want to solve
2. Submit a 90-second video describing your challenge and proposed solution, team, and plan

3. Answer a short, four-question narrative and make a slide about this problem or challenge
4. Submit a two-page technical assistance request
5. Update your videos and statements as you advance through the contests.

Read more about preferred innovation approaches for the Prize at our [ProblemSpace](#) platform or attend the [Solar Prize information webinar](#) hosted by NREL on 8/19. When you're ready to go, share your idea at the [American-Made Solar Prize](#) application site.

Awards: Winning teams receive *up to \$500K in non-dilutive funding* in addition to in-kind support from the National Labs. To date, 60 winners from 23 different states have been selected over 3 rounds for a total of \$9M in funding. In addition to the publicity and resources associated with selection by DOE / NREL, the winners benefit from a much more streamlined funding process versus traditional collaborative awards and grants, allowing them to hit the ground running quickly, with minimal restrictions.

Letter of Intent: Please visit the [How to Compete in the American-Made Solar Prize page](#) to view the full rules for the American-Made Challenges Solar Prize.

Submission Deadline: October 8, 2020

Contact: Chris Richardson [ADL Ventures](#) - [Email](#)

Grant Program: Research and Development for Advanced Water Resource Recovery Systems

Agency: Department of Energy DE-FOA-0002336

Website: <https://eere-exchange.energy.gov/#Foaldfa6e43fc-9abe-4c4f-867b-224e5fb1d6bb>

Brief Description: Energy is often the second-highest operating cost (behind labor costs) for water and wastewater treatment systems. Black & Veatch's client surveys indicate that energy costs at water and wastewater utilities account for well over 10% of total operating costs for a large majority of utilities, with a significant number of utilities having energy costs that exceed 30 percent. Increasingly stringent regulations for contaminants are pushing water and wastewater treatment systems to use even more advanced – and energy intensive – treatment technologies. The energy use of these systems is expected to increase by up to 20 percent in the coming decades due to more stringent water quality standards and growing water demand based on population growth. Additionally, water and wastewater treatment facilities, pipes, and related infrastructure in cities around the country are approaching their end of expected service life. Therefore, a unique window of opportunity exists to replace the aging infrastructure with new, innovative approaches to water and wastewater treatment, resource recovery, and water reuse by looking more broadly at interconnected, cross-sector opportunities (i.e. municipal, industrial, agriculture, oil and gas, etc.) across the energy-water nexus to develop water and wastewater treatment systems of the future – advanced water resource recovery systems. The goal of this Funding Opportunity Announcement (FOA) is to conduct research, development, and deployment on technology innovations that enable advanced water resource recovery systems. Topic Area 1 of this FOA seeks to advance the development of transformative technologies beyond early stage research and development (R&D) to become pilot ready (TRL 4-6). Whereas, Topic Area 2 of this FOA seeks to test currently developed, pilot ready technologies (TRL 6-7) through design, build, and operations in industrially relevant conditions to enable commercialization.

Awards: Estimated Total Program Funding: \$20,000,000

Letter of Intent: Concept Paper Submission Deadline: 8/4/2020 5:00 PM ET

Submission Deadline: Full Application Submission Deadline: 10/6/2020 5:00 PM ET

Contact: Questions regarding the FOA must be submitted to AMOWaterFOA@ee.doe.gov

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NASA

Grant Program: 2020 Human Exploration Research Opportunities (HERO)

Agency: NASA 80JSC020N0001-OMNIBUS1

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B2B94302E-810F-1496-2800-F2632701BFC3%7D&path=&method=init>

Brief Description: This National Aeronautics and Space Administration (NASA) Research Announcement (NRA), entitled “Human Exploration Research Opportunities (HERO)–2020”, solicits applied research in support of NASA’s Human Research Program (HRP). The research will fall into one or more categories corresponding to HRP’s five Elements: Space Radiation, Human Health Countermeasures, Exploration Medical Capability, Human Factors and Behavioral Performance, and Research Operations and Integration. This NRA covers all aspects of research to provide human health and performance countermeasures, knowledge, technologies, and tools to enable safe, reliable, and productive human space exploration.

Awards: Grants issued in response to this Omnibus opportunity are expected to last one year and cost no more than \$150,000 total per award.

Notice of Intent: Step-1 Proposal is required

Proposal Deadline:

OMNIBUS1 Step-1 Proposals Due Sep 01, 2020

OMNIBUS1 Step-2 Proposals Due Dec 01, 2020

Contact: Jennifer Fogarty, Ph.D. Chief Scientist, Human Research Program, NASA Johnson Space Center (Mail Code SA2), Houston, TX 77058 Telephone: 281-483-9753

Grant Program: ROSES 2020: Science Team for the OCO Missions

Agency: NASA NNH20ZDA001N-OCOST

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B7B9745C4-04AD-74F8-59B7-3CF0C8EF15E3%7D&path=&method=init>

Brief Description: Proposals are solicited for participation in the Science Team for the Orbiting Carbon Observatory-2 (OCO-2) and Orbiting Carbon Observatory-3 (OCO-3) missions. NASA launched the OCO-2 mission in July 2014. OCO-2 has been operating on orbit, producing precise column average CO₂ concentration data globally with validated precision and accuracy of better than 0.25% , since September 2014. The OCO-3 mission, with a near-replica instrument to OCO-2, has been operating on the International Space Station (ISS) since June of 2019 and is now returning data with similar precisions as OCO-2. The primary differences in the data sets are the spatial and temporal sampling as a result of the different orbits of the observations (especially inclination) and the available observational modes of the instruments.

Awards: Funding anticipated: \$3,500,000

Notice of Intent: November 13, 2020

Proposal Deadline: January 13, 2021

Contact: Kenneth W. Jucks, Earth Science Division, Science Mission Directorate, NASA Headquarters Washington, DC 20546-0001 Telephone: 202-358-0476 Email: kenneth.w.jucks@nasa.gov

Grant Program: ROSES 2020: SAGE III/ ISS Science Team

Agency: NASA NNH20ZDA001N-SAGEIII

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BABC8F050-A310-7184-B919-6220765BAF10%7D&path=&method=init>

Brief Description: NASA's research for furthering our understanding of atmospheric composition is geared toward providing an improved prognostic capability for key processes and issues, including the recovery of stratospheric ozone and its impacts on surface ultraviolet radiation, evolution of greenhouse gases and their impacts on climate, and evolution of tropospheric ozone and aerosols and their impacts on climate and air quality. Research within the Atmospheric Composition Focus Area addresses the following science questions: • How is atmospheric composition changing? • What trends in atmospheric composition and solar radiation are driving global climate? • How does atmospheric composition respond to and affect global environmental change? • What are the effects of global atmospheric composition and climate changes on regional air quality? • How will future changes in atmospheric composition affect ozone, climate, and global air quality?

Awards: Funding anticipated: \$1,500,000

Notice of Intent: September 18, 2020

Proposal Deadline: November 6, 2020

Contact: Richard S. Eckman, Earth Science Division, Science Mission Directorate, NASA Headquarters Washington, DC 20546-0001, Telephone: 202-358-2567 Email: Richard.S.Eckman@nasa.gov

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

Agency: NASA 80HQTR20NOA01-21NIAC-A1

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B9BC1CCC6-3CB9-30BA-8C21-0B88402F4A2A%7D&path=&method=init>

Brief Description: The 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. Proposed concepts must be framed in terms of a mission context that clearly identifies scientific or technical advancements and associated benefits compared to current approaches. Comparatively high risk and far term, NIAC concepts are transformational investments in future NASA and commercial space capabilities. The entry Technology Readiness Level (TRL) for Phase I concepts should be TRL 2 or lower. Proposed concepts must identify credible approaches toward new scientific or technical innovations that advance NASA's strategic themes to Discover, Explore, Develop, and Enable, as outlined in the 2018 NASA Strategic Plan. Advancements are sought across the broad spectrum of disciplines that support the goals and objectives encompassed by these themes, including nontraditional areas such as biophysics, life sciences, human factors engineering, artificial intelligence, resource sustainability, and other topics that may inspire innovative approaches to meet future exploration needs.

Awards: Expected Award Amount: Not to exceed \$125K Expected Number of Awards: 12-16

Proposal Deadline: Step-A Proposals Due: July 22, 2020 (5:00 pm Eastern)

Step B Invitations Issued: August 25, 2020 (Target) Step B Proposal Due: September 29, 2020 (Target), 5:00pm ET

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

Grant Program: ROSES 2020: The New (Early Career) Investigator Program in Earth Science

Agency: NASA NNH20ZDA001N-NIP

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BB05DE781-3B1F-E548-F61A-BB14F66A2FAE%7D&path=&method=init>

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

The NIP supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (See the NASA Science Plan <http://science.nasa.gov/about-us/science-strategy/>).

Awards: Various; Available funding: \$3,000,000

Proposal Deadline: September 20, 2021

Contact: Allison Leidner Earth Science Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: 202.358.0855 Email: Allison.K.Leidner@nasa.gov

Grant Program: ROSES 2020: Space Weather Science Application Operations-to-Research

Agency: NASA NNH20ZDA001N-SWO2R

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B2FF5915D-4700-7B3B-43F1-0094ED1BE130%7D&path=&method=init>

Brief Description: The primary goal of the Space Weather Science Application Operations-to-Research (SWO2R) program is to support research to improve numerical models and/or data utilization techniques that could advance specification and/or forecasting capabilities and which could also lead to improved scientific understanding.

The primary goal of this solicitation is to support research to improve numerical models and/or data utilization techniques that could advance forecasting and/or specification capabilities and which could also lead to improved scientific understanding. Effective utilization of available data is encouraged. Employing advanced techniques for data assimilation, ensemble, and/or machine-learning is also encouraged. Improved neutral density specification and forecast capabilities could include, for example, effects of forcing from below, effects of variations in solar EUV flux, effects of heating from particle precipitation and joule dissipation, assimilation of satellite drag data, and regional variations in density. Improved neutral density specification and forecasts can support numerous applications, including satellite drag and orbit propagation, meeting Orbital Debris Mitigation Standard Practices (ODMSP), and planning satellite megaconstellation operations. Improved forecasting and specification of the ionosphere could include the dynamics of total electron content, ionospheric scintillation, and electron density structure.

Awards: Various; Available funding: \$2,000,000

Step 1 Proposal: December 16, 2020

Step 2 Proposal Deadline: February 17, 2021

Contact: James Spann Heliophysics Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: 202-358-0574 Email: jim.spann@nasa.gov

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National Endowment of Humanities

Grant Program: Media Projects

Agency: National Endowment for the Humanities 20200812-TD-TR

Website: <https://www.neh.gov/program/media-projects>

Brief Description: The Media Projects program supports the development, production, and distribution of radio, podcast, television, and long-form documentary film projects that engage general audiences with humanities ideas in creative and appealing ways. All projects must be grounded in humanities scholarship and demonstrate an approach that is thoughtful, balanced, and analytical. The approach to the subject matter must go beyond the mere presentation of factual information to explore its larger significance and stimulate reflection. Media Projects offers two levels of funding: Development and Production.

Awards: Maximum award amount: \$75,000 for Development, \$700,000 for Production, \$1,000,000 for Chairman's Special Awards

Proposal Deadline: August 12, 2020

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

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Private Foundations

Activate.ORG

Grant Program: Activate Fellowships

Agency: Activate.org

Website: <https://www.activate.org/>

Brief Description: We exist to discover, fund, champion, and propel individuals who have a technology vision that could benefit society and who are committed to bringing it to the world as a new product or business. Every year, we work with our partners to select a cohort of entrepreneurial scientists and engineers from around the world to be fellows. For two years these innovators embed in a world-class research institution, where they are supported with funding, mentorship, education, and connections with our network of industry leaders, investors, and philanthropists.

Our goal is simple: empower fellows to mature their ideas from concept to first product, while positioning them to align with the most suitable commercial path to bring their technology to scale.

Awards: Fellows receive a yearly living stipend of \$80,000 to \$110,000 plus a health insurance stipend and travel allowance. This enables them to focus on their project full-time. Each project also receives \$100,000 of research support at the host laboratory.

Proposal Deadline: Applications open early October

Contact: If interested, please contact Dr. Michael Ehrlich, Associate Professor, Martin Tuchman School of Management, and Co-Director of NJ Innovation Acceleration Center at michael.a.ehrlich@njit.edu

Research Corporation for Science Advancement

Grant Program: Cottrell Scholar Award

Agency:

Research Corporation for Science Advancement

Website: <https://rescorp.org/cottrell-scholars/guidelines>

Brief Description: The Cottrell Scholar Award (CSA) is available to early career faculty at US and Canadian research universities and primarily undergraduate institutions. Eligible applicants are tenure-track faculty who hold primary or courtesy appointments in chemistry, physics, or astronomy departments that offer bachelor's and/or graduate degrees in the applicant's discipline. For the 2020 proposal cycle, eligibility is limited to faculty members who started their first tenure-track appointment anytime in calendar year 2017. Accommodations are made for faculty who have taken maternity or paternity leave, or who have experienced medical conditions that prompted a tenure clock extension. To request an eligibility extension, contact Senior Program Director Silvia Ronco (sronco@rescorp.org).

Awards: Cottrell Scholar Awards are for three-year projects in the amount of \$100,000 for the entire project.

Proposal Deadline: In 2020, the CSA proposal target date is **July 1, 2020**. However, due to the COVID-19 emergency, the submission portal will remain open until **August 15, 2020** midnight PDT (hard deadline). The CSA online submission portal opened **March 1, 2020**. 2021 Cottrell Scholar Awards will be announced by **February 15, 2021**.

Contact: If interested, please send an email to Atam Dhawan (dhawan@njit.edu) or Richard Rosenberg at rnr@njit.edu

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Streamlyne Question of the Week

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

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

More FAQs on Streamlyne: Please visit <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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