NJIT Research Newsletter

Issue: ORN-2020-32

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

NSF Major Research Instrumentation (MRI) Proposal submission Internal Competition

Grant Program: NSF Major Research Instrumentation Program: (MRI)
Agency: National Science Foundation NSF 18-513
RFP Website: https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm
Brief Description: The Major Research Instrumentation (MRI) Program serves to increase access to multi-user scientific and engineering instrumentation for research and research training in our Nation's institutions of higher education and not-for-profit scientific/engineering research organizations. An MRI award supports the acquisition or development of a multi-user research instrument that is, in general, too costly and/or not appropriate for support through other NSF programs.

MRI provides support to acquire critical research instrumentation without which advances in fundamental science and engineering research may not otherwise occur. MRI also provides support to develop next-generation research instruments that open new opportunities to advance the frontiers in science and engineering research. Additionally, an MRI award is expected to enhance research training of students who will become the next generation of instrument users, designers and builders.

An MRI proposal may request up to $4 million for either acquisition or development of a research instrument. Beginning with the FY 2018 competition, each performing organization may submit in *revised* "Tracks" as defined below, *with no more than two submissions in Track 1 and no more than one submission in Track 2*.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to $100,000[1] and less than $1,000,000.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to $1,000,000 up to and including $4,000,000.

Consistent with the America COMPETES Act of 2007 (Public Law 110-69), cost sharing of precisely 30% of the total project cost is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from the cost-sharing requirement and cannot include it. National Science Board policy prohibits voluntary committed cost sharing.

Please see the solicitation text for organizational definitions used by the MRI program.

The MRI Program especially seeks broad representation of PIs in its award portfolio, including women, underrepresented minorities and persons with disabilities. Since demographic diversity may be greater among early-career researchers the MRI program also encourages proposals with early-career PIs and proposals that benefit early-career researchers.

Awards Range: $100,000-$4 million; **Anticipated Funding Amount:** $75,000,000

Letter of Intent: Not Required

Submission Deadline: January 01, 2021 - January 19, 2021

Limit on Number of Proposals per Organization:

Three (3) as described below. Potential PIs are advised to contact their institutional office of research regarding processes used to select proposals for submission.

The MRI program requires that an MRI-eligible organization may, as a performing organization, submit or be included as a significantly funded [3] subawardee in no more than three MRI proposals. Beginning with this competition, each performing organization is now limited to a maximum of three proposals in *revised* "Tracks" as defined below, with no more than two submissions in Track 1 and no more than one submission in Track 2. Any MRI proposal may request support for either the acquisition or development of a research instrument. Within their submission limit, NSF strongly encourages organizations to submit proposals for innovative development projects.

Award Type: Any MRI proposal may request support for either the acquisition or development of a research instrument.

- Track 1: Track 1 MRI proposals are those that request funds from NSF greater than or equal to $100,000[1] and less than $1,000,000.
- Track 2: Track 2 MRI proposals are those that request funds from NSF greater than or equal to $1,000,000 up to and including $4,000,000.

Note: The 30% cost-sharing requirement applies to only the portion of the total project cost budgeted to non-exempt organizations, including those participating through subawards. When required, cost-sharing must be precisely 30%. Cost sharing is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from cost-sharing and cannot provide it. National Science Board policy is that vol untary committed cost

sharing is prohibited. See section V.B. for specific information on cost-sharing calculations and the solicitation text for definitions of organizational types used for the MRI program.

[3] An unfunded collaboration does not count against the submission limit. Inclusion as a funded subawardee on a development proposal at a level in excess of 20% of the total budget requested from NSF, or as a funded subawardee, when allowed, on any acquisition proposal, will be counted against an organization's proposal submission limit. Separately submitted linked collaborative proposals count against the submission limit of each of the submitting organizations. However, if a subaward to an organization in a *development proposal* is 20% or less of the proposal's total budget request from NSF, the subawardee's submission limit will not be affected. For subawards within a linked collaborative proposal, the 20% threshold applies to the budget request from NSF in the proposal containing the subaward(s), not to the combined budget request from NSF for the collaborative project.

Internal Competition Deadline to College Dean's Office: November 1, 2020: Please submit up to 5 pages pre-proposal white paper to your respective Dean by November 1, 2020 in the following format. College level reviews will be conducted by Deans to forward recommendations for up to 2 proposals to the Office of Research and Development by November 7, 2020. The final selection will be announced by November 15, 2020. The following format for the pre-proposal is suggested which is consistent with actual proposal guidelines and review criterion:

1. Cover Sheet (not counted in the page limit):
    a. Title of the project proposal
    b. Track Type: I or II
    c. PI name and affiliation and contact information
    d. Co-PIs name and affiliation
    e. Additional users or any consortium information, if applicable
    f. Date submitted to College Dean
2. Project Summary

Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.

3. Proposal Description covering the subsections (a)-(e) as posted on the previous RFP on https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm with the section:

    (a) **a1. Instrument Location and Type**

a2. *ONLY REQUIRED FOR DEVELOPMENT PROPOSALS:* Justification for submission as a Development proposal

    (b) Research Activities to be Enabled
    (c) Description of the Research Instrumentation and Needs
    (d) Broader Impacts (Including Impact on Research and Training Infrastructure)
    (e) Management Plan
4. Preliminary Budget and Budget Justification; and Required Cost-Sharing
5. Brief biographical sketch of PI with a brief description of current and previous accomplishments.

For pre-proposal review, the NSF MRI proposal review criterion may be used to help faculty receive some feedback on their proposals that may be helpful for their final or future proposal submissions.

The merit review criterion as included in the RFP and posted on the website https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm will be sued in evaluating the internal pre-proposals.

New Jersey Alliance for Clinical and Translational Science (NJ ACTS) Institutional Career Development (KL2) Program

The New Jersey Alliance for Clinical and Translational Science (NJ ACTS), NJ's CTSA, is delighted to announce that it is soliciting applications for its Institutional Career Development (KL2) program. The second class of KL2 Scholars will be appointed starting July 1, 2021. This is an important opportunity for early stage faculty to be able to devote 80% effort to their projects, receive research funding and have the support of the community. The program Description and application information is posted on the NJACTS website https://njacts.rbhs.rutgers.edu/education-training/kl2-career-development/. Applications are due November 2, 2021. For more information, contact KL2NJACTS@rbhs.rutgers.edu.

NJIT Pandemic Recovery Plan

Research Continuity and Phased Recovery Plan
Updated: July 27, 2020
https://research.njit.edu/njit-pandemic-recovery-plan

NJIT faculty, staff, and students at research facilities must follow the specific social distancing and safety protocols including the use of personnel protective equipment (PPE) as required by the 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
- 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

The details on NJIT Research Continuity and Phased Recovery Plan and associated protocols are posted on the website https://research.njit.edu/njit-pandemic-recovery-plan

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Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: **Harnessing the Data Revolution: Coordination Hub (HDR Central); International Research Experiences for Students (IRES); Arctic Doctoral Dissertation Research Improvement Grants (Arctic DDRIG) Arctic Social Sciences, Arctic System Sciences, and Arctic Observing Network (DDRIG); Proposals for Community Instruments and Facilities (CIF);** Innovations in Graduate Education (IGE) Program; Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII); Cyberinfrastructure for Sustained Scientific Innovation (CSSI); Computer and Information Science and Engineering (CISE)

NIH: **Innovative Research in Cancer Nanotechnology (IRCN) (R01); Cellular and Molecular Biology of Complex Brain Disorders (R21);** BRAIN Initiative: Data Archives for the BRAIN Initiative

(R24 Emergency Awards: RADx-rad Data Coordination Center (DCC) (U24); Emergency Awards: RADx-rad Wastewater Detection of SARS-COV-2 (COVID-19) (U01); Emergency Awards RADx-RAD: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (Fast-Track STTR); Emergency Awards: RADx-RAD Multimodal COVID-19 surveillance methods for high risk clustered populations (R01); Ethical, Legal and Social Implications (ELSI) Exploratory/Developmental Research Grant (R21)

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;** 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: **NRCS's Regional Conservation Partnership Program;** Agriculture and Food Research Initiative - Foundational and Applied Science; REAP-Renewable Energy Systems and Energy Efficiency Improvements

Department of Labor: Supply Chains Tracing Project

EPA: **2020 RFI for Hydrogen and Fuel Cell Technologies Office (HFTO);** 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: **Cooperative Agreement to establish a Heliophysics Science Center (HSC);** ROSES 2020: Science Team for the OCO Missions; SAGE III/ ISS Science Team**;** Solar Irradiance Science Team; The New (Early Career) Investigator Program in Earth Science; ROSES 2020: Space Weather Science Application Operations-to-Research

National Endowment of Humanities: **Public Humanities Projects**

Private Foundations: Activate.Org: Activate Fellowships

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Recent Research Grant and Contract Awards

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

PI: Alexander Haimovich (PI)
Department: Electrical and Computer Engineering
Grant/Contract Project Title: End-to-end Deep Learning Radar System
Funding Agency: U.S. Army (ARL)
Duration: 08/10/20-08/09/21

PI: John Federici (PI) and Ian Gatley (Co-PI)
Department: Physics
Grant/Contract Project Title: Terahertz Imaging and Spectroscopy for Non-Destructive Evaluation of Polyethylene Pipes
Funding Agency: Northeast Gas Association
Duration: 01/01/19-08/31/21

PI: Senjuti Basu Roy (PI)
Department: Computer Science
Grant/Contract Project Title: Collaborative Research: An Optimization Framework for Designing Derived Attributes with Humans-in-the-loop
Funding Agency: NSF
Duration: 10/01/20-09/30/23

PI: Kamalesh Sirkar (PI)
Department: Chemical and Material Engineering
Grant/Contract Project Title: Develop membranes for pressure-driven separation of solutes and solvents in the 50-600 Da range from API synthesis mixtures
Funding Agency: American Chemical Society
Duration: 10/01/20-09/30/21

PI: Jacob Chakareski (PI)
Department: Informatics
Grant/Contract Project Title: The Future VR/AR Network -- Towards Virtual Human/Object Teleportation: NSF Workshop on Networked Virtual and Augmented Reality
Funding Agency: NSF
Duration: 04/20/20-02/28/21

PI: Alexei Khalizov (PI)
Department: Chemistry and Environmental Sciences
Grant/Contract Project Title: (SUPPLEMENT) CAREER: Molecular Mechanism of Atmospheric Mercury through Speciation-Resolved Experiments
Funding Agency: NSF
Duration: 05/01/16-04/30/21

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In the News…

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

NIH Associate Director on Data Science Research: In times of crisis—like the current COVID-19 pandemic—medical innovations have to move at the speed of the virus instead of the traditional research timeline. In order for that to happen, researchers need access to timely, standardized data, and they need it all in one place. That's one of a number of efforts spearheaded by Dr. Susan Gregurick, associate director for data science at the National Institutes of Health and head of the relatively new Office of Data Science Strategy, launched in 2018. While major innovations are cutting down development times for new therapeutics, vaccines and diagnostics tools, Gregurick said she expects data science to make significant leaps forward, as well. "In data science, some interesting innovation is coming through truly making our platforms actually interoperable. This is because folks are dedicated to this and are working long hours building on existing platforms to make truly interoperable, at-scale resources," she said. "Then, in the future, we're going to see some pretty cool innovations in terms of how people aggregate and analyze data, how they develop new AI tools. … I think that we're going to see new innovations in the

analysis of data because we've made so much data available in such a short period of time." More information is posted on the [GovExec website](#).

Former EPA Leaders Call for 'Reset' of Agency's Mission: Six former Environmental Protection Agency administrators, who served under Democrats and Republicans, called for a "reset" at the agency to renew its focus on public health and environmental protection. The former administrators wrote an open [letter](#) as part of a [campaign](#) by the [Environmental Protection Network](#), made up of over 500 former career and political EPA employees, as the agency approaches its 50th anniversary in December. The letter doesn't mention President Trump specifically, but comes as his administration has reportedly sidelined science experts in regard to [climate change](#), [deregulation](#), the [coronavirus pandemic](#) and [scientific integrity](#) during the last three and a half years. "Fifty years ago, pollution was visible and unrelenting throughout our country," wrote the former administrators, who served between 1985 and 2017 (the Reagan to Obama administrations). "Today, less visible, but equally dangerous environmental hazards threaten communities in ways that differ [from] place to place [and] person to person. Speedier, more effective assessments and responses will be needed to face this and future pandemics, new toxic hazards and other emerging or unmitigated health risks."

The EPA contested that it needs a reset. "EPA Administrator [Andrew] Wheeler is proud of our record addressing environmental problems impacting Americans, including delisting superfund sites that have lingered for years, cleaning up lead contaminated communities, and improving air quality," EPA spokesman James Hewitt told *Government Executive*, in response to the letter. "He won't be taking 'reset' advice from administrators who ignored the Flint lead crisis, botched the Gold King Mine response, and encouraged New Yorkers to breathe contaminated air at Ground Zero." More information is posted on the [website](#).

NASA Recharges Ingenuity On Way To Mars For First Time: [Phys (UK)](#) (8/13) reports that NASA's Ingenuity Mars Helicopter "received a checkout and recharge of its power system on Friday, Aug. 7, one week into its near seven-month journey to Mars with the Perseverance rover." The recharge "marks the first time the helicopter has been powered up and its batteries have been charged in the space environment." During the "eight-hour operation, the performance of the rotorcraft's six lithium-ion batteries was analyzed as the team brought their charge level up to 35%. The project has determined a low charge state is optimal for battery health during the cruise to Mars." NASA JPL operation lead for Mars Helicopter Tim Canham said, "This was a big milestone, as it was our first opportunity to turn on Ingenuity and give its electronics a 'test drive' since we launched on July 30. ... Since everything went by the book, we'll perform the same activity about every two weeks to maintain an acceptable state of charge."

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.
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Webinar and Events

Event: August Virtual Office Hour with The Division of Integrative Organismal Systems (IOS)!
Sponsor: NSF
When: August 20, 2020 1.00 PM – 2.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=301015&org=NSF
Brief Description: The August IOS Virtual Office Hour will be held August 20, 2020 from 1pm-2pm EST. This Office Hour will include discussion of recent solicitations and Dear Colleague Letters that have been announced by NSF and we'll move on to a discussion of the Enabling Discovery through Genomic Tools (EDGE; NSF 20-532) program. The discussion will be followed by an open question and answer period for questions about EDGE, any other IOS-program questions, COVID-19 concerns and questions, or other NSF-related questions you might have.
Join us remotely and bring your questions, comments, and ideas!
To Join the Webinar: Register for the August Virtual Office Hour here, and be sure to choose August 20th.

Event: Computer and Information Science & Engineering Research Initiation Initiative (CRII) Program Webinar
Sponsor: NSF
When: September 10, 2020 1.00 PM – 2.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=301065&org=NSF
Brief Description: Program directors from across CISE will host a 90 minute webinar to provide the CISE community with information about the Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII) and answer questions. The solicitation may be found on the NSF website: https://www.nsf.gov/pubs/2020/nsf20593/nsf20593.htm The NSF Directorate for Computer and Information Science and Engineering (CISE) seeks to award grants intended to support research independence among early-career academicians who specifically lack access to adequate organizational or other resources. It is expected that funds obtained through this program will be used to support untenured faculty or research scientists (or equivalent) in their first three years in a primary academic position after the PhD, but not more than five years after completion of their PhD.
Importantly, the CRII program seeks to provide essential resources to enable early-career PIs to launch their research careers. For the purposes of this program, CISE defines "essential resources" as sufficient funds for 48 months of graduate student support. A new Department Chair/Head Letter template [https://nsf.gov/cise/crii/deptchair.pdf] must be used to affirm PI eligibility. The primary change in the CRII solicitation compared to the previous solicitation is a clearer definition of how this support must be calculated.
To Join the Webinar: To join the webinar, please register at: https://nsf.zoomgov.com/webinar/register/WN_1nTF1KZXRICJ9huZHJI2pQ

Event: National Academies Webinars
Sponsor: The national Academies of Science, Engineering and Medicine
When: August 18, 25, 2020 and September 1, 8, 2020; 3.00 PM – 4.00 PM
Website: webinar series
Brief Description: The mathematical sciences play a critical role in advancing crucial innovations and improving our prosperity, health, and security. Join us for a series of webinars featuring mathematicians telling the most important stories of how math has made an impact, from precision medicine to climate science.

This webinar series is part of a larger National Academies' study that will identify and illustrate the broad impact of the mathematical sciences. Learn more about the study at nas.edu/bmsa.

August 18 from 3-4pm ET: Super-Compatibility and the Design of Materials (join here)

In this webinar, "Supercompatibility and the Design of Materials," invited speakers will discuss how mathematical methodologies can aid the design of smart materials, which have incredible potential to impact the future of how things are made.

- Moderator: Irene Fonseca (Carnegie Mellon University)
- Speaker 1: Richard James (University of Minnesota)
- Speaker 2: Robert Kohn (New York University)

August 25 from 3-4pm ET: Precision Medicine (join here)

In this webinar, "Precision Medicine," invited speakers will discuss how mathematics improves healthcare by helping researchers and doctors make better-informed diagnostic and treatment decisions.

- Moderator: Trachette Jackson (University of Michigan)
- Speaker 1: Kristin Swanson (Mayo Clinic)
- Speaker 2: Charley Taylor (Heartflow)

September 1 from 3-4pm ET: Deep Learning and Neural Networks (join here)

In this webinar, "Deep Learning and Neural Networks," invited speakers will illustrate the math that facilitated the development of the complex computational learning systems that we take advantage of every day, perhaps without even realizing it.

- Moderator: Montse Fuentes (University of Iowa)
- Speaker 1: Mikhail Belkin (Ohio State University)
- Speaker 2: Rachel Ward (University of Texas)

September 8 from 3-4pm ET: Climate and Weather (join here)

In this webinar, "Climate and Weather," invited speakers will examine what really drives forecasts and allows us to be better-prepared for natural disasters and climate variability - mathematical models!

- Moderator: Russ Caflisch (New York University)
- Speaker 1: Tim Delsole (George Mason University)
- Speaker 2: Laure Zanna (New York University)

To Join the Webinar: Please use the above links.

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Grant Opportunities

National Science Foundation

Grant Program: Harnessing the Data Revolution: Coordination Hub (HDR Central)
Agency: National Science Foundation NSF 20-600
RFP Website:
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505820&org=NSF&sel_org=NSF&from=fund
Brief Description: The Big Ideas represent unique opportunities to position our Nation at the cutting edge of global science and engineering by bringing together diverse disciplinary perspectives to support convergence research. When responding to this solicitation, even though proposals must be submitted through the **Directorate for Computer and Information Science and Engineering, Office of Advanced Cyberinfrastructure, CISE/OAC**, once received, the proposals will be managed by a cross-disciplinary team of NSF Program Directors.

NSF's *Harnessing the Data Revolution (HDR) Big Idea* is a national-scale activity to enable new modes of data-driven discovery that will allow fundamental questions to be asked and answered at the frontiers of science and engineering. In 2019, the HDR Big Idea launched three parallel efforts in pursuit of these aims: Institutes for Data-Intensive Research in Science and Engineering (I-DIRSE), HDR: Transdisciplinary Research In Principles Of Data Science Phase I (HDR TRIPODS Phase I), and Data Science Corps (DSC). To engage participants across these efforts and amplify their impacts, this program solicits proposals for a nationwide HDR Coordination Hub, called HDR Central. The overarching purpose of HDR Central will be to increase the impact of the HDR Big Idea by supporting coordination and communication among all HDR projects, and by sharing HDR efforts and outcomes with the public.
Awards: Standard and continuing grants; **Anticipated Funding Amount:** $10,000,000
Letters of Intent: Not required
Proposal Submission Deadline: November 12, 2020
Contacts: Amy Walton   HDRCentral@nsf.gov   (703)292-4538
Huixia (Judy) Wang HDRCentral@nsf.gov   (703)292-2279

Grant Program: International Research Experiences for Students (IRES)
Agency: National Science Foundation NSF 20-598
RFP Website: https://www.nsf.gov/pubs/2020/nsf20598/nsf20598.htm
Brief Description: The International Research Experiences for Students (IRES) program supports international research and research-related activities for U.S. science and engineering students. The IRES program contributes to development of a diverse, globally engaged workforce with world-class skills. IRES focuses on active research participation by undergraduate and/or graduate students in high quality international research, education and professional development experiences in NSF-funded research areas. The overarching, long-term goal of the IRES program is to enhance U.S. leadership in science and engineering research and education and to strengthen economic competitiveness through training the next generation of research leaders. This solicitation features two mechanisms; proposers are required to select one of the following tracks to submit their proposal.
Track I focuses on the development of world-class research skills in international cohort experiences.
Track II is dedicated to targeted, intensive learning and training opportunities that leverage international knowledge at the frontiers of research.
Student participants supported by IRES funds must be citizens, nationals, or permanent residents of the United States.
Students do not apply directly to NSF to participate in IRES activities. Students apply to NSF-funded investigators who receive IRES awards. To identify appropriate IRES projects, students should consult the directory of active IRES awards.
All PIs, co-PIs and Senior Personnel on IRES proposals must be from U.S. based organizations. International partners should be listed as "unfunded collaborators."

1. **IRES - Track I:** *IRES Sites* **(IS)** projects engage a group of undergraduate and/or graduate students in active high-quality collaborative research, in principle at an international site with mentorship from researchers at a host lab. IRES Sites must be organized around a coherent intellectual theme that may involve a single discipline or multiple disciplines funded by NSF.
2. **IRES - Track II:** *Advanced Studies Institutes* **(ASI)** are intensive short courses with related activities that engage advanced graduate students in active learning and research at the frontiers of knowledge. ASIs typically range in length from ten to twenty-one days and, in principle, must be held outside the United States. ASIs must have a compelling rationale for their international location and should involve distinguished active researchers in the target field from the U.S. and abroad. ASIs should enable students to develop skills and broaden professional networks,

leveraging international participation and complementary resources (expertise, facilities, data, field site, etc.) for mutual benefit.

Awards: Standard Grant or Continuing Grant; **Anticipated Funding Amount:** $10,000,000

Track- I: IRES Sites. Up to $300,000 per award. For exceptionally creative proposals, awards up to $400,000 will be considered.

Track- II: Advanced Studies Institutes. Typically, an average ASI budget is $150,000 for each institute. Proposals involving a series of institutes are permitted when well-justified. The overall total budget for Track II proposals should not exceed $400,000.

Letters of Intent: Not required

Proposal Submission Deadline: November 09, 2020; September 28, 2021

Track - II: Advanced Studies Institutes
    November 12, 2020; September 21, 2021
Track - I: IRES Sites

Contacts: Fahmida N. Chowdhury, telephone: (703) 292-4672, email: fchowdhu@nsf.gov

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Grant Program: Arctic Doctoral Dissertation Research Improvement Grants (Arctic DDRIG) Arctic Social Sciences, Arctic System Sciences, and Arctic Observing Network (DDRIG)
Agency: National Science Foundation NSF 20-597
RFP Website: https://www.nsf.gov/pubs/2020/nsf20597/nsf20597.htm

Brief Description: The goal of this solicitation is to attract research proposals that advance a fundamental, process, and systems-level understanding of the Arctic's rapidly changing natural environment and social and cultural systems, and, where appropriate, to improve our capacity to project future change. The Arctic Sciences Section supports research focused on the Arctic region and its connectivity with lower latitudes. The scientific scope is aligned with, but not limited to, research challenges outlined in the Interagency Arctic Research Policy Committee's five-year Arctic research plan (https://www.nsf.gov/geo/opp/arctic/iarpc/start.jsp). Given that this solicitation is designed to support early career scientists, this Program will also advance research capacity in Arctic sciences, promote workforce development, and enhance diversity and inclusion in Science, Technology, Engineering, and Math (STEM). The Arctic Sciences Section coordinates with programs across NSF and with other federal and international partners to co-review and co-fund Arctic proposals as appropriate. The Arctic Sciences Section also maintains Arctic logistical infrastructure and field support capabilities that are available to enable research.

Awards: Standard Grant or Continuing Grant; **Anticipated Funding Amount:** $1,250,000

Letters of Intent: Not required

Proposal Submission Deadline: December 15, 2020

Contacts: Gregory J. Anderson, Program Director, Arctic System Sciences, W7243, telephone: (703) 292-4693, email: greander@nsf.gov

- Roberto Delgado, Program Director, Arctic Observing Network, W7246, telephone: (703) 292-2397, email: robdelga@nsf.gov
- Erica Hill, Program Director, Arctic Social Sciences, W7176, telephone: (703) 292-4521, email: erhill@nsf.gov

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Grant Program: Proposals for Community Instruments and Facilities (CIF)
Agency: National Science Foundation NSF 20-596
RFP Website: https://www.nsf.gov/pubs/2020/nsf20596/nsf20596.htm

Brief Description: The intent of the Community Instruments and Facilities (CIF) solicitation is to provide the NSF-sponsored atmospheric sciences research community with access to specialized instrumentation for field and laboratory-based studies. The CIF solicitation requests proposals from instrument and facility providers who will make their equipment available for community use through an NSF-defined request process. Support will be provided for limited technician time, minor upgrades, and travel for outreach.
The Community Instruments and Facilities (CIF) solicitation is intended to expand the suite of instruments and facilities available to the atmospheric science community supported by NSF. Proposals funded through this solicitation will promote research and education in areas currently supported by the Atmospheric Science programs. Detailed descriptions of research programs of the Atmosphere Section within AGS are available at - https://www.nsf.gov/funding/programs.jsp?org=AGS
Awards: Continuing Grant; **Anticipated Funding Amount:** $3,000,000
Letters of Intent: October 21, 2020
Proposal Submission Deadline: December 10, 2020
Contacts: Shree Mishra, telephone: (703) 292-8521, email: sumishra@nsf.gov

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Grant Program: Innovations in Graduate Education (IGE) Program
Agency: National Science Foundation NSF 20-595
RFP Website: https://www.nsf.gov/pubs/2020/nsf20595/nsf20595.htm
Brief Description: The Innovations in Graduate Education (IGE) program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. The program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended to generate the knowledge required for their customization, implementation, and broader adoption. The program supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches.

The program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. Strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

As a special emphasis under this solicitation, IGE seeks proposals that will result in a single cooperative agreement for the development and implementation of an IGE Innovation Acceleration Hub. The Hub will facilitate IGE awardee communications about research activities and outcomes and provide a platform for external stakeholder engagement. Only Hub proposals submitted to the November 2020 deadline will be considered for funding.
Awards: Standard or continuing grants; **Anticipated Funding Amount:** $4,000,000
Letters of Intent: Not required
Proposal Submission Deadline: November 04, 2020
Limit on Number of Proposals per Organization: 2
An eligible organization may participate in two Innovations in Graduate Education proposals per competition. Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal.
Internal Letter of Intent Review and Competition: If you are interested in submitting a proposal, please send a one-page NSF format summary with a list of Key Investigators to Atam Dhawan, Senior Vice Provost for Research at dhawan@njit.edu by September 1, 2020 with copy to respective college dean. The selected Letter of Intent will be notified by September 7, 2020.

Contacts: Daniel Denecke, telephone: (703) 292-8072, email: ddenecke@nsf.gov
- Vinod K. Lohani, telephone: (703) 292-2330, email: vlohani@nsf.gov
- John Weishampel, telephone: (703) 292-2162, email: jweisham@nsf.gov

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Grant Program: Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)
Agency: National Science Foundation NSF 20-593
RFP Website: https://www.nsf.gov/pubs/2020/nsf20593/nsf20593.htm
Brief Description: The NSF Directorate for Computer and Information Science and Engineering (CISE) seeks to award grants intended to support research independence among early-career academicians who specifically lack access to adequate organizational or other resources. It is expected that funds obtained through this program will be used to support untenured faculty or research scientists (or equivalent) in their first three years in a primary academic position after the PhD, but not more than five years after completion of their PhD. Applicants for this program may not yet have received any other grants or contracts in the PI role from any department, agency, or institution of the federal government, including from the CAREER program or any other program, post-PhD, regardless of the size of the grant or contract, with certain exceptions as noted below. Serving as co-PI, Senior Personnel, Postdoctoral Fellow, or other Fellow does not count against this eligibility rule.

Importantly, the CRII program seeks to provide essential resources to enable early-career PIs to launch their research careers. For the purposes of this program, CISE defines "essential resources" as sufficient funds for 48 months of graduate student support. Faculty at undergraduate and two-year institutions may use funds to support undergraduate students, and may optionally use the additional RUI designation (which requires inclusion of a RUI Impact Statement) -- see https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518 for additional information. In addition, submissions from all institutions may use funds for PI salary, postdoctoral scholars, travel, and/or research equipment.

Awards: Standard grants; **Anticipated Funding Amount:** $10,000,000
Letters of Intent: Not required
Proposal Submission Deadline: November 02, 2020
Contacts: Jeremy J. Epstein, Program Director, CNS, phone: (703) 292-8338, email: jepstein@nsf.gov
- Almadena Y. Chtchelkanova, Program Director, CCF, telephone: (703) 292-8910, email: achtchel@nsf.gov
- Ephraim P. Glinert, Program Director, IIS, telephone: (703) 292-8930, email: eglinert@nsf.gov

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Grant Program: Cyberinfrastructure for Sustained Scientific Innovation (CSSI): Elements and Framework Implementations
Agency: National Science Foundation NSF 20-592
RFP Website: https://www.nsf.gov/pubs/2020/nsf20592/nsf20592.htm
Brief Description: The Cyberinfrastructure for Sustained Scientific Innovation (CSSI) umbrella program seeks to enable funding opportunities that are flexible and responsive to the evolving and emerging needs in cyberinfrastructure (CI). This program continues the CSSI program by removing the distinction between *software* and *data* elements/framework implementations, and instead emphasizing integrated CI services, quantitative metrics with targets for delivery and usage of these services, and community creation.

The CSSI umbrella program anticipates two classes of awards:

- **Elements:** These awards target small groups that will create and deploy robust services for which there is a demonstrated need, and that will advance one or more significant areas of science and engineering.
- **Framework Implementations:** These awards target larger, interdisciplinary teams organized around the development and application of services aimed at solving common research problems faced by NSF researchers in one or more areas of science and engineering, and resulting in a sustainable community framework providing CI services to a diverse community or communities.

Prospective Principal Investigators (PIs) should be aware that this is a multi-directorate activity and that they are encouraged to submit proposals with broad, interdisciplinary interests. Further, not all divisions are participating at the same level and division-specific priorities differ. Prospective PIs should also refer to the directorate/division-specific descriptions contained in Section II of this solicitation.

Finally, it is strongly recommended that prospective PIs contact program officer(s) from the list of Cognizant Program Officers in the division(s) that typically support the scientists and engineers who would make use of the proposed work, to gain insight into the priorities for the relevant areas of science and engineering to which their proposals should be responsive. As part of contacting Cognizant Program Officers, prospective PIs are also encouraged to ascertain that the focus and budget of their proposed work are appropriate for this solicitation.

Awards: Standard or continuing grants; **Anticipated Funding Amount:** $33,000,000
Letters of Intent: Not required
Proposal Submission Deadline: October 28, 2020
Contacts: Stefan A. Robila, Program Director, CISE/OAC, telephone: (703) 292-2303,
email: CSSIQueries@nsf.gov
- Amy Walton, Program Director, CISE/OAC, telephone: (703) 292-4538,
  email: CSSIQueries@nsf.gov
- Tevfik Kosar, Program Director, CISE/OAC, telephone: (703) 292-8970,
  email: CSSIQueries@nsf.gov

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

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National Institutes of Health

Grant Program: Innovative Research in Cancer Nanotechnology (IRCN) (R01 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-20-284

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-20-284.html

Brief Description: IRCN awards are expected to advance employment of nanotechnology in understanding, diagnosing, and treating neoplastic diseases. Each proposed IRCN project is expected to generate new fundamental knowledge aiding the development of nanotechnology-based solutions to major problems in cancer biology and/or oncology. Typical efforts and applications in this area of research involve 1) demonstration of therapies based on nanoparticle delivery with the attempt to obtain improved efficacy and 2) demonstration of diagnostic tools (*in vitro* or *in vivo*) with improved sensitivity and specificity. These are clearly important objectives, but it is often that the above goals can be accomplished without a full understanding of the therapeutic mode of action or insight into mechanisms contributing to improved sensitivity and specificity of diagnostics. Projects submitted to this FOA need to be designed differently. While proposing an innovative, nanotechnology-based solution to cancer biology and/or oncology problems, the project should focus on mechanistic studies. These studies are expected to address the fundamental understanding of nanomaterial and/or nano-device interactions with biological systems in the effort to uncover mechanisms governing effective delivery of nanoparticles and/or nano-devices to desired and intended cancer targets *in vivo* and/or successful operation of detection and diagnostic devices and sensors *in vitro*. *The innovative use of nanotechnology to solve cancer biology/oncology problems is*

viewed as more significant than innovation in nanotechnology itself (e.g., development of new nanomaterials).

Awards: Application budgets are limited to $450K in direct costs per year and need to reflect the actual needs of the proposed project.

Letter of Intent: Not applicable

Proposal Submission Deadline: November 4, 2020, May 6, 2021, November 4, 2021, May 5, 2021, November 3, 3022, May 4, 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: Piotr Grodzinski, Ph.D. National Cancer Institute (NCI) Telephone 240-781-3305 Email: grodzinp@mail.nih.gov

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Grant Program: Cellular and Molecular Biology of Complex Brain Disorders (R21 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-20-264

Companion Opportunities:

PAR-20-263 -   R01 Research Project Grant

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-20-264.html

Brief Description: This FOA encourages research on the biology of high confidence risk factors associated with complex brain disorders, with a focus on the intracellular, transcellular and circuit substrates of neural function. For the purposes of this FOA, the term "complex" can refer to a multifactorial contribution to risk (e.g., polygenic and/or environmental) and/or highly distributed functional features of the brain disorder. Studies may be either hypothesis-generating (unbiased discovery) or hypothesis-testing in design and may utilize *in vivo, in situ* or *in vitro* experimental paradigms, e.g., model organisms or human cell-based assays. While behavioral paradigms and outcome measures can be incorporated into the research design to facilitate the characterization of intracellular, transcellular and circuit mechanisms, these are neither required nor expected. Studies should not attempt to "model" disorders but instead should aim to elucidate the neurobiological impact of individual or combined risk factor(s), such as the affected molecular and cellular components and their relationships within defined biological process(es). This can include the fundamental biology of these factors, components and processes. The resulting paradigms, component pathways and biological processes should be disseminated with sufficient detail to enrich common and/or federated data resources (e.g., those contributing to the Gene Ontology, Synaptic Gene Ontology, FAIR Data Informatics) in order to bridge the gap between disease risk factors, biological mechanism and therapeutic target identification. See Section IV, Application and Submission Information, Data and Resource Sharing.

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

Letter of Intent: Not applicable

Proposal Submission Deadline: Standard dates apply. The first standard application due date for this FOA is October 16, 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: Joy Boyer, National Human Genome Research Institute (NHGRI), Telephone: 301-402-4997
Email: boyerj@mail.nih.gov

Grant Program: BRAIN Initiative: Data Archives for the BRAIN Initiative (R24 Clinical Trial Optional)
Agency: National Institutes of Health RFA-MH-20-600
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-20-600.html
Brief Description: The purpose of this FOA is to provide support for the creation and management of more than one data archive to hold data related to the BRAIN Initiative. These archives are part of the informatics infrastructure for the BRAIN Initiative. The other components of that infrastructure include developing data standards that are needed to describe the new experiments that are being created by or used in the BRAIN Initiative (RFA-MH-17-256 , RFA-MH-19-146, and RFA-MH-20-128), and developing software to visualize and analyze the data (RFA-MH-17-257 and RFA-MH-19-147). Each of these components is aimed at building an infrastructure that is used by a particular sub-domain of BRAIN Initiative related experiments rather than building a single all-encompassing informatics infrastructure. Building the infrastructure one experimental area at a time will ensure that the infrastructure is immediately useful to the research community. As our understanding of the brain improves, we plan to create linkages between these various sub-domain specific informatics programs. While current efforts are limited in scope, investigators of the informatics programs should factor in plans for the eventual linkage of the various sub-domain specific informatics programs.

The data archives supported under this FOA are expected to use relevant standards that describe BRAIN Initiative experiments, and to be integrated with relevant software tools for visualization and analysis of archived data. Such standards and tools may be developed under BRAIN Initiative informatics awards or may already exist. Awardees under all the informatics programs are expected to work together. The awardees should budget for hackathons and other collaborative efforts that will be necessary to integrate the products produced by all awardees. Collaborations with neuro-informatics efforts outside of the BRAIN Initiative are both welcome and encouraged.
Awards: Application budgets are not limited but need to reflect the actual needs of the proposed project.
Letter of Intent: 30 days prior to the application due dates
Proposal Submission Deadline: July 14, 2021, July 14, 2022, and July 14, 2023 by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates. 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: Ming Zhan, Ph.D., National Institute of Mental Health (NIMH), Telephone: 301-827-3678
Email: ming.zhan@nih.gov

Grant Program: Emergency Awards: RADx-rad Data Coordination Center (DCC) (U24 Clinical Trial Not Allowed)
Agency: National Institutes of Health RFA-OD-20-019
Companion Opportunities:

NOT-OD-20-159 - Notice of Special Interest (NOSI): Availability of Emergency Competitive Revisions for Wastewater Surveillance Research for Public Health Response to Coronavirus Disease 2019 (COVID-19)

RFA-OD-20-015 - Emergency Awards: RADx-rad Wastewater Detection of SARS-COV-2 (COVID-19) (U01 - Clinical Trials Not Allowed)

RFA-OD-20-014 - Emergency Awards: Automatic Detection and Tracing of SARS-CoV-2 (U01 Clinical Trial Not Allowed)

RFA-OD-20-020 - Emergency Awards RADx-rad: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (R44 Clinical Trial Not Allowed)

RFA-OD-20-021 - Emergency Awards RADx-rad: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (Fast-Track STTR Clinical Trial Not Allowed)

NOT-OD-20-152 - Availability of Emergency Competitive Revisions for Chemosensory Testing as a COVID-19 Screening Tool

RFA-OD-20-022 - Chemosensory Testing as a COVID-19 Screening Tool (U01 Clinical Trial Optional)

RFA-OD-20-016 - Emergency Awards: RADx-rad Multimodal COVID-19 surveillance methods for high risk clustered populations (R01 Clinical Trial Optional)

RFA-OD-20-017 - Emergency Awards RADx-rad: Screening for COVID-19 by Electronic-Nose Technology (SCENT) (U18 Clinical Trial Not Allowed)

RFA-OD-20-018 - Emergency Awards: Exosome-based Non-traditional Technologies Towards Multi-Parametric and Integrated Approaches for SARS-CoV-2 (U18 Clinical Trial Not Allowed)

RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-019.html

Brief Description: Expanding the capacity, throughput, and regional placement of existing technologies and accelerating the development of new technologies will contribute significantly to the current national efforts to curb the COVID-19 pandemic. To help meet this need, NIH launched the Rapid Acceleration of Diagnostics (RADx) program to speed innovation in the development, commercialization, and implementation of technologies for COVID-19 testing. The RADx program is a national call for scientists and organizations to bring their innovative ideas for new COVID-19 testing approaches and strategies.

As a part of this program, the NIH developed the RADx Radical (RADx-rad) initiative. RADx-rad will support new, or non-traditional applications of existing approaches, to enhance their usability, accessibility, and/or accuracy. RADx-rad will be centrally aligned and coordinated to harmonize the data collection, storage, and management, providing an opportunity to further explore and identify additional approaches to understand this novel virus. Beyond the current crisis, it is anticipated that the technologies advanced through RADx-rad may also be applicable to other, yet unknown, infectious agents.

The RADx-rad Data Coordination Center (DCC) will provide overarching support and guidance to RADx-rad awardees in the following three areas: (1) Administrative Operations and Logistics, (2) Data Collection, Integration and Sharing, and (3) Data Management and Use.

Awards: Application budgets are limited to $4 Million in annual direct costs.

Letter of Intent: August 31, 2020

Proposal Submission Deadline: September 30, 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: Valerie Florance, PhD, National Library of Medicine (NLM), Telephone: 301-496-4621
Email: florancev@mail.nih.gov

Grant Program: Emergency Awards: RADx-rad Wastewater Detection of SARS-COV-2 (COVID-19) (U01 - Clinical Trials Not Allowed)
Agency: National Institutes of Health RFA-OD-20-015
Companion Opportunities:
RFA-OD-20-014 - Emergency Awards: Automatic Detection and Tracing of SARS-CoV-2 (U01 Clinical Trial Not Allowed)
RFA-OD-20-020 - Emergency Awards RADx-rad: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (R44 Clinical Trial Not Allowed)
RFA-OD-20-021 - Emergency Awards RADx-rad: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (Fast-Track STTR Clinical Trial Not Allowed)
NOT-OD-20-152 - Availability of Emergency Competitive Revisions for Chemosensory Testing as a COVID-19 Screening Tool
RFA-OD-20-022 - Chemosensory Testing as a COVID-19 Screening Tool (U01 Clinical Trial Optional)
RFA-OD-20-016 - Emergency Awards: RADx-rad Multimodal COVID-19 surveillance methods for high risk clustered populations (R01 Clinical Trial Optional)
RFA-OD-20-017 - Emergency Awards RADx-rad: Screening for COVID-19 by Electronic-Nose Technology (SCENT) (U18 Clinical Trial Not Allowed)
RFA-OD-20-018 - Emergency Awards: Exosome-based Non-traditional Technologies Towards Multi-Parametric and Integrated Approaches for SARS-CoV-2 (U18 Clinical Trial Not Allowed)
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-015.html
Brief Description: Because traces of COVID-19 can be detected in human effluent, wastewater (i.e. sewage) sample testing can be an efficient and effective way to test defined population areas for the presence of COVID-19. Wastewater-based testing can be used alongside national and local data sources to provide cost-effective and objective measures of the presence of a specific compound (e.g., drug, virus). For over 20 years, wastewater-based testing (WBT), initially proposed by the U.S. Environmental Protection Agency, has been used in Europe, Australia, and the U.S. to test for the presence and extent of substance use in communities. Wastewater-based epidemiology (WBE) has also been successfully used as a surveillance tool for SARS, hepatitis A, and polio. Recent ongoing studies based on WBT with COVID-19 have provided an earlier prediction of an outbreak of COVID-19 cases, compared to data provided by individual-level testing, suggesting the possibility of using these data to inform early containment and mitigation measurements.

Historically, wastewater analysis approaches have focused on downstream sample collection, namely at the water treatment plants, which provides broad, city-level sampling that cannot be directly used to guide more localized estimates and related interventions. More recent novel approaches have focused on upstream sample collection, which allows for more granular, community- and neighborhood-level resolution. Advantages of such an approach, compared to individual-level testing, include the ability to capture a broader population size, the ability to be deployed in communities where individual-level testing may be difficult to implement, and anonymity of testing, which may reduce barriers to testing related to stigma. Community-level sampling can also be deployed in settings with a high risk of disease transmission (e.g., criminal justice facilities, assisted living/nursing home facilities, dormitories), within communities that are particularly vulnerable to COVID-19 due to underlying health conditions or other factors, and in areas with marginalized populations where access to or utilization of healthcare services, including individualized testing, may be limited. WBT-based surveillance can provide detailed mapping of the extent and spread of COVID-19 and has been shown to be orders of magnitude less expensive and faster than clinical screening, albeit serving as a complementary approach rather than substituting for individual-level testing and screening. Early engagement of communities in the identification of testing

sites and implementation of testing, as well as dissemination of the data produced and reporting back to the community, may also improve compliance with community guidance aimed at preventing the spread of SARS-CoV-2, and mitigation strategies. Longer-term, the approaches developed for SARS-CoV-2 detection in wastewater could be leveraged to enable creation of early warning systems for future outbreaks of known and emerging pathogens.

Awards: Application budgets are limited to $2,000,000 per year in Direct Costs and need to reflect the actual needs of the proposed project.

Letter of Intent: August 15, 2020

Proposal Submission Deadline: September 15, 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: David Balshaw, Ph.D., National Institute of Environmental Health Sciences (NIEHS) 984-287-3234; david.balshaw@nih.gov

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Grant Program: Emergency Awards RADx-RAD: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (Fast-Track STTR Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-OD-20-021

Companion Opportunities:

RFA-OD-20-019 - Emergency Awards: RADx-rad Data Coordination Center (DCC) (U24 Clinical Trial Not Allowed)

RFA-OD-20-020 - Emergency Awards RADx-RAD: Novel Biosensing for Screening, Diagnosis and Monitoring of COVID-19 From Skin and The Oral Cavity (Direct to Phase II SBIR Clinical Trial Not Allowed)

RFA-OD-20-017 - Emergency Awards RADx-RAD: Screening for COVID-19 by Electronic-Nose Technology (SCENT) (U18 Clinical Trial Not Allowed)

RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-021.html

Brief Description: This RFA solicits **Fast-Track STTR** applications to advance development of novel, non-traditional, safe and effective biosensing and detection approaches to identify the current SARS-CoV-2 virus or biomarkers of the COVID-19 disease, and/or with potential to address other pandemics from unknown viruses. Biosensing and detection technologies submitted to this initiative should provide associations between biomarkers emanating from **skin** or the **oral cavity** to patients with symptomatic and asymptomatic COVID-19. Leveraging the accessibility of human skin and the oral cavity, this FOA seeks 1) to advance novel biosensing technologies that are innovative, safe, and effective, and 2) to implement such technologies into devices with integrated artificial intelligent (AI) systems for the detection, diagnosis, prediction, prognosis and monitoring of COVID-19 in clinical, community and everyday settings.

Biosensing devices are expected to **target skin or the oral cavity as sampling sites**. Skin biosensing designs must target detection of volatile organic compounds (VOCs, i.e. scents or odors) emanating from skin in passive and noninvasive manner for use at point of care. In addition to VOCs, oral biosensing technologies may target a wealth of biological, chemical and physical biosignatures representative of SARS-CoV-2 virus and/or COVID-19 disease sampled from exhaled breath/droplets, saliva, and tissues in the oral cavity using a variety of detection schemes.

Awards: Total funding support (direct costs, indirect costs, fee) normally may not exceed $256,580 for Phase I awards and $1,710,531 for Phase II awards.
Letter of Intent: August 18, 2020
Proposal Submission Deadline: September 18, 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: Orlando Lopez, Ph.D., National Institute of Dental and Craniofacial Research (NIDCR)
Telephone: 301-402-4243, Email: orlando.lopez@nih.gov

Grant Program: Emergency Awards: RADx-RAD Multimodal COVID-19 surveillance methods for high risk clustered populations (R01 Clinical Trial Optional)
Agency: National Institutes of Health RFA-OD-20-016
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-016.html
Brief Description: This FOA seeks research applications expanding the capacity, throughput, and regional placement of existing technologies and accelerating the development of new technologies that will contribute significantly to the current national efforts to curb the COVID-19 pandemic. The proposed surveillance technologies could include digital and algorithmic features, biometric technologies, and internet-based participatory surveillance, but should be adapted to the specific conditions of the high-density circumstances of residential care institutions or medical facilities. The responsive projects would focus on development of robust, local, real-time, accurate and cost-effective surveillance projects that demonstrate innovative integration of technologies. In addition to functional surveillance, these projects may also explore novel methods of data collection and interpretation and use of machine intelligence to facilitate broad-based, real-time assessment, along with data modeling, prediction and visualization (which would require the use of standard vocabulary and common data elements (CDE)), all in the context of addressing the needs of high risk, vulnerable populations. The applicants are encouraged to incorporate partnership with at least one category of at-risk institutions or facilities (e.g., senior living systems, jails and prisons, residential treatment facilities, dialysis units) to demonstrate the effectiveness of the novel surveillance approaches in a real-world setting.
Awards: Application budgets are not limited but need to reflect the actual needs of the proposed project.
Letter of Intent: August 30, 2020
Proposal Submission Deadline: September 30, 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: Elena Koustova, PhD, MBA, National Institute on Drug Abuse (NIDA), Phone: 301-496-8768, E-mail:elena.koustova@nih.gov

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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

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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

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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

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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

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: NRCS's Regional Conservation Partnership Program
Agency: Department of Agriculture USDA-NRCS-NHQ-RCPPC-21-NOFO0001033
Website: https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/
Brief Description: The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address. Successful RCPP projects embody the following core principles:
  - **Impact**—RCPP applications must propose effective and compelling solutions that address one or more natural resource priorities to help solve natural resource challenges. Partners are responsible for evaluating a project's impact and results.
  - **Partner Contributions**—Partners are responsible for identifying any combination of cash and in-kind value-added contributions to leverage NRCS's RCPP investments. It is NRCS's goal that partner contributions at least equal the NRCS investment in an RCPP project. Substantive partner contributions are given priority consideration as part of the RCPP application evaluation criteria.
  - **Innovation**—NRCS seeks projects that integrate multiple conservation approaches, implement innovative conservation approaches or technologies, build new partnerships, and effectively take advantage of program flexibilities to deliver conservation solutions.
  - **Partnerships and Management**—Partners must have experience, expertise, and capacity to manage the partnership and project, provide outreach to producers, and quantify the environmental outcomes of an RCPP project. RCPP ranking criteria give preference to applicants that meaningfully engage historically underserved farmers and ranchers.
Awards: Up to $10,000,000; Anticipated available funding: $360,000,000
Proposal Deadline: RCPP Classic Application Period Open through November 4, 2020
Contact Information: NRCS RCPP Staff

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: 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

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EPA

Grant Program: 2020 RFI for Hydrogen and Fuel Cell Technologies Office (HFTO)
Agency: Environmental Protection Agency DE-FOA-0002379
Website: EERE Funding Opportunity Exchange
Brief Description: The U.S. Department of Energy's (DOE's) Hydrogen and Fuel Cell Technologies Office (HFTO) within the Office of Energy Efficiency and Renewable Energy (EERE) solicits feedback from industry, academia, research laboratories, government agencies, and other stakeholders through this RFI. This is solely a request for information and not a Funding Opportunity Announcement (FOA). EERE is not accepting applications.

HFTO is issuing a Request for Information to obtain public input on its efforts to accelerate research, development, demonstration, commercialization, and adoption of hydrogen and fuel cell technologies.

This RFI is issued to understand how hydrogen and fuel cell research priorities and goals can address evolving technology needs and to inform related research, development and demonstration (RD&D) activities that may be undertaken by DOE. The information being sought under this RFI is intended to assist HFTO in further defining the scope and priorities of its RD&D initiatives as well as its consortia that were established to address its priorities.

The information collected may be used for internal HFTO planning and decision-making purposes, including but not limited to determining potential new areas of focus, funding opportunities, analyses, and organizational frameworks for national lab-based consortia.

Areas of Interest:
- H2@Scale Initiative
- HFTO Strategy and Multiyear Plan
- Priority Application Focus Areas
- Funding Mechanisms and Opportunities (including consortia models)

Award: TBA
Submission Deadline: Full Application Submission Deadline: 9/15/2020 5:00 PM ET
Contact: HFTORFI@ee.doe.gov
HFTO RFI Inbox, Submit RFI Responses to this Inbox

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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: September 22, 2020, 11:59 p.m. ET.
Contact: Channing Shepherd, (202) 566-1238. 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

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](#)
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NASA

Grant Program: Cooperative Agreement to establish a Heliophysics Science Center (HSC)
Agency: NASA 80GSFC20R0046
Website: https://beta.sam.gov/opp/43657853fb38436d8991ea02cfcf4450/view
Brief Description: NASA Goddard Space Flight Center (GSFC) intends to issue a Cooperative Agreement Notice (CAN) to re-compete the cooperative agreement for the Heliophysics Science Center. The NASA /GSFC Heliophysics Science Center (HSC) will carry out basic and applied research in the field of heliophysics in relation to NASA's Strategic Goals. GSFC and external scientists will cooperatively carry out observational, experimental, and theoretical research in support of NASA's strategic heliophysics science objectives. NASA's prime strategic goal for heliophysics is to understand the Sun and its interactions with Earth, the solar system and the interstellar medium, including space weather. It is anticipated that the subject CAN will be a full and open competition, and a Cooperative Agreement (CA) will be the result of this effort. The period of performance will be for approximately five years from the date of the award.
Awards: NASA intends for the CAN to be awarded as a **SINGLE** cooperative agreement that will establish a center of excellence in heliophysics. Where multiple organizations are teaming in response to this CAN, the team's proposal should name a single organization to serve as the formal partner to, and recipient of, the cooperative agreement, with a description of how the research activities will be distributed and managed among the team partners. NASA will **ONLY** consider proposals from Educational Institution and Non Profit organizations.
Notice of Intent: TBA
Proposal Deadline: The Government anticipates a release of the CAN by late August early September 2020. NASA Clause 1852.215-84, Ombudsman, is applicable. The Center Ombudsman for this acquisition can be found at http://prod.nais.nasa.gov/pub/pub_library/Omb.html.
Contact: Pauline Barrett sislyn.p.barrett@nasa.gov

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 CO_2 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

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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

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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

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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: Public Humanities Projects
Agency: National Endowment for the Humanities 20200907-BP-BR-GE-GG-GI
Website: https://www.neh.gov/grants/public/public-humanities-projects
Brief Description: The Public Humanities Projects program supports projects that bring the ideas and insights of the humanities to life for general audiences through in-person programming. Projects must engage humanities scholarship to analyze significant themes in disciplines such as history, literature, ethics, and art history. Public Humanities Projects supports projects in three program categories (Exhibitions, Historic Places, and Humanities Discussions), and at two funding levels (Planning and Implementation). Regardless of proposed activity, NEH encourages applicants to explore humanities ideas through multiple formats. Proposed projects may include complementary components: for example, a museum exhibition might be accompanied by a website or mobile app.
Proposal Deadline: Optional Draft due August 20, 2020; Application due September 8, 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.
Awards: Fellows receive a yearly living stipend of $80,000 to $110,000 plus a health insurance stipend and travel allowance. 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

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Streamlyne Question of the Week

Question: How can I update my eRA Commons ID for all future NIH proposals?
Answer: Go to Main Menu>Setting>Person Extended Attributes, click "Edit", enter it under "eRA Commons User Name" and submit the change/update.
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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