

NJIT Research Newsletter

Issue: ORN-2020-06

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**. The Newsletter is posted on the NJIT Research Website <https://research.njit.edu/funding-opportunities>.

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Special Announcements

Important Information on NSF Proposal Submission Effective June 1, 2020

https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf20001&org=NSF

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 20-1), is effective for proposals submitted, or due, on or after June 1, 2020. Please be advised that, depending on the specified due date, the guidelines contained in NSF 20-1 may apply to proposals submitted in response to this funding opportunity.

Call for Proposals

2020 Provost Undergraduate Research and Innovation (URI) Summer Fellowship Program

Online Submission Deadline: March 27, 2020

https://www5.njit.edu/provost/events/undergrad_research.php

Undergraduate research provides students a unique opportunity to learn necessary and important skills to research and innovate towards taking a leadership role in the society. As a student-centered research institution, NJIT is committed to providing opportunities for research participation beginning at the undergraduate level.

ABOUT THE PROGRAM: *The NJIT Provost Undergraduate Research and Innovation (URI) Summer Fellowship Program* is a 10-week program that provides summer stipend support to

undergraduate students from all disciplines to pursue research under the guidance of a faculty advisor on a competitive basis. Eligible undergraduate students should apply online with their proposals following the instructions provided below. The program concludes with presentations at the NJIT International Summer Undergraduate Research Symposium on July 30, 2020.

Program Period: This 10-week program begins on May 26, 2020 and ends on July 31, 2020.

Application Deadlines: Both the research proposal and faculty letter of support are to be submitted online via supplied links by 11:59 p.m. EST on March 27, 2020.

Program Requirements: Please consider the following requirements carefully before applying.

- Fellowship students should not be engaged in outside employment or coursework during the program period. Participation requires **full-time engagement** by the student.
- All Fellowship students are expected to fully participate in all aspects of the program and fill-out the time-sheet for hours of work with their respective advisors.
- All Fellowship students are required to participate in the *NJIT International Summer Undergraduate Research Symposium* on July 30, 2020.
- Fellowship students are highly encouraged to mentor a high school students on the project during the program period.

ELIGIBILITY: Any current NJIT student who will be enrolled as an undergraduate in the Fall 2020 semester may apply.

AWARDS: The Summer Fellowship Award amount is \$3000 stipend. Please be aware that this award is during summer 2020.

HOW TO APPLY: Submission of all applications is online via links supplied in this document. Applications are due March 27, 2020. Review the information provided in this document. Application links and forms are supplied at the end.

SUBMISSION FORMS/APPLICATION LINKS

Students: [Application Form](#)

Faculty: [Faculty Letter of Submission](#)

Questions: [Frequently Asked Questions](#)

Program Information: [Undergraduate Research Program Summer Provost Fellowship](#)

For additional information, please visit the URI website <http://centers.njit.edu/uri/programs/provost-fellowship.php>. Any questions should be directed to Ms. Brenda Herman, Undergraduate Research and Innovation Programs Coordinator at brenda.g.herman@njit.edu.

Call for Proposals

Spring 2020 Undergraduate Research and Innovation (URI) Student Seed Grants

Phase-1 Student Seed Grants: \$500 per project
URI Phase-2 Student Seed Grants: \$3,000 per project

Track-1 Technology/Product Development and Innovation
Track-2: Application Based Research

Proposal Submission Deadline: March 3, 2020

URI Workshop Proposal Presentations:
March 31, 2020; 2.00 PM – 5.30 PM; Ballroom A, Campus Center

The Undergraduate Research and Innovation (URI) program has evolved as a significant part of the education and research experience at NJIT. The URI website <http://centers.njit.edu/uri/> summarizes undergraduate research and innovation opportunities and provides information about resources and competitions.

We are pleased to announce the Undergraduate Research and Innovation Student Grant (URISG) program to provide students Phase-1 Student Seed Grants of \$500 per project to pursue preliminary research or demonstrate an initial proof-of-concept/prototypes. URI Phase-2 Student Seed Grants provides up to \$3,000 per project to pursue research further or develop a complete prototype. Funds can only be used to order project supplies and prototyping through the Office of Undergraduate Research and Innovation. Phase-2 proposals may be submitted by former Phase-1 Student Seed Grant winners who have completed Phase-1 work, as well as new students who have a research or product idea that has shown the preliminary proof of concept, market assessment or application-based research to establish the need, significance and basic approach. The student may prepare URI Student Phase-1 or Phase-2 Seed Grant proposals following the templates with [format and guidelines](#).

All projects proposals should be submitted by **March 3, 2020**. Awardees will have access to funds to start the project as early as April 15, 2020 and will formally present progress report at the subsequent URI workshops. Each student team awardee is required to take a [lab safety training](#) (and a biosafety training, if applicable) and their advisors have to submit a completed EHS Undergraduates in Laboratories and Shops form before they will be given access to funds.

Proposal Submission Deadlines

- Students working with a faculty member may submit **Track-1 Technology/Product Development and Innovation or Track-2: Application Based Research** proposals in the required format by **March 3, 2020**. Proposal Format Guidelines information are [here](#) and on the [URI website](#).
- Complete and submit the [Spring 2020 Student Seed Grant Application](#) by **March 3, 2020**. You will need to have your research proposal ready to upload when you fill out the online application form.
- Finalists selected for URI workshop presentation will be announced by **March 13, 2020**. Finalists are required to present their project through a PowerPoint presentations to the External Advisory Board following the presentation format posted on the website at the URI Workshop on **March 31, 2020** at the Campus Center Ballroom A from 2.00 PM to 5.30 PM.

Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Small Business Technology Transfer Program Phase II (STTR Phase II); Small Business Innovation Research Program Phase II (SBIR Phase II); Foundational Research in Robotics; Reproducible Cells and Organoids via Directed- Differentiation Encoding (RECODE); NSF-Simons Research Collaborations on the Mathematical and Scientific Foundations of Deep Learning (MoDL); Computer Science for All (CSforAll: Research and RPPs); Spectrum and Wireless Innovation enabled by Future Technologies (SWIFT); Division of Integrative Organismal Systems Core Programs; International Research and education Network Connections (IRNC); Principles and Practice of Scalable Systems (PPoSS); Enabling Discovery through GENomic Tools (EDGE); Algorithms for Threat Detection (ATD)

NIH: Optimizing Natural Systems for Remediation: Utilizing Innovative Materials Science Approaches to Enhance Bioremediation (R01); Collaborative Program Grant for Multidisciplinary Teams (RM1); IDeA Networks of Biomedical Research Excellence (INBRE) (P20); Environmental Health Sciences Core Centers (EHSCC) (P30); Development of Innovative Informatics Methods and Algorithms for Cancer Research and Management (R21); Biomedical Research Facilities (C06); Silvio O. Conte Centers for Basic Neuroscience or Translational Mental Health Research (P50); NIBIB Trailblazer Award for New and Early Stage Investigators (R21); Engineering Next-Generation Human Nervous System Microphysiological Systems (R21 and R01); BRAIN Initiative: Biology and Biophysics of Neural Stimulation and Recording Technologies (R01)

Department of Defense/US Army/DARPA/ONR: FY 2021 Defense University Research Instrumentation Program (DURIP); Quantum Information Sciences; Synthetic Biology (SynBio) Manufacturing Innovation Institute (MII); Science, Technology, Engineering, and Mathematics (STEM) Educational Outreach Programs; Hydrogen Fuel Cell-Battery Powered Hybrid Emergency Relief Truck: ‘H2Rescue’; Fiscal Year (FY) 2021 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) Manufacturing Science Program; NRL Long Range Broad Agency Announcement (BAA) for Basic and Applied Research; C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research, Air Superiority Technology Broad Agency Announcement; DSO Office-wide Broad Agency Announcement

Department of Transportation: Grants or Research Fellowship (GRF)

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

Department of Labor: Apprenticeships: Closing the Skills Gap

EPA: Community-Scale Air Toxics Ambient Monitoring; FY2020 National Environmental Information Exchange Network Grant Program; FY 2020 – FY 2021 Pollution Prevention Grant Program

Department of Energy: Notice of Intent to Issue Funding Opportunity Connected Communities; Solar Energy Technologies Office Fiscal Year 2020 Funding Program: Workforce Development in Emerging Fields; Request for Information: Prediction of Solar Variability for Better Grid Integration; FY2020 Research Opportunities in Accelerator Stewardship; Advanced Vehicle Technologies Research Funding Opportunity Announcement; FY20 Bioenergy Technologies Multi-Topic FOA

NASA: ROSES 2020: Heliophysics Supporting Research; Astrophysics Data Analysis; HELIOPHYSICS - Early Career Investigator Program; Astrophysics Research and Analysis; Early Career Faculty; ROSES 2019: Sustainable Land Imaging-Technology

National Endowment of Humanities: Advanced Topics in the Digital Humanities; Fellowships

Arnold and Mabel Beckman Foundation: Beckman Scholar Program

Recent Research Grant and Contract Awards

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

PI: Usman Roshan (PI)
Department: Computer Science
Grant/Contract Project Title: Services for Vertex, Inc.
Funding Agency: Vertex
Duration: 01/02/20-06/30/20

PI: Paul Ranky (PI)
Department: Mechanical and Industrial Engineering
Grant/Contract Project Title: I-CORPS: Quantifiable Service Quality Firmware System
Funding Agency: NSF
Duration: 02/05/20-07/31/20

PI: Bin Chen (PI)
Department: Center for Solar Terrestrial Research
Grant/Contract Project Title: CAREER: Probing Energy Release in Solar Explosive Events with New Generation Radio Telescopes
Funding Agency: NSF
Duration: 01/15/17-12/31/21

PI: Colette Santasieri (PI)
Department: Technology and Business Development
Grant/Contract Project Title: NJ Brownfields Assistance Center @ NJIT
Funding Agency: NJ EDA
Duration: 02/12/20-02/11/21

In the News...

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

Latest White House FY21 \$4.8T Budget Features Funding to Quantum Science, AI, and Space Exploration: Trump Administration released **new budget request** cuts the National Institutes of Health (NIH), the National Science Foundation, and basic research at the Department of Defense. Following is the summary of the latest FY21 budget:

ACCELERATING UNITED STATES R&D: In a time of great power competition, President Trump's FY 2021 Budget puts America in position to maintain its global leadership in science and technology for generations to come.

- President Trump's FY 2021 Budget invests \$142.2 billion in Federal research and development (R&D), a 6 percent increase over his FY 2020 budget.
- The President's Budget prioritizes the Industries of the Future, and commits to double R&D spending in nondefense artificial intelligence (AI) and quantum information science (QIS) by 2022.

- President Trump is the first President in American history to include AI and QIS as Administration R&D priorities. Since his inauguration, the Trump Administration has supported historic investments in R&D, bold national strategies, a pro-growth regulatory agenda, and a commitment to the American workforce.
- Beyond R&D, the FY 2021 Budget includes investments in education and job training that will help create a diverse and highly skilled American workforce to support the Industries of the Future.
 - At the National Science Foundation, an additional \$50 million will go toward AI and QIS workforce development, with a focus on community colleges, Historically Black Colleges and Universities, and Minority Serving Institutions.

ARTIFICIAL INTELLIGENCE: The President’s FY 2021 Budget includes a significant increase in nondefense AI R&D compared to the FY 2020 Budget and is on a path to double nondefense AI R&D by 2022.

- This increase brings spending for AI R&D and interdisciplinary research institutes at the National Science Foundation to more than \$830 million, which represents a more than 70 percent increase over the FY 2020 budget.
- The Department of Energy’s Office of Science will invest \$125 million in AI research, a \$54 million increase over FY 2020.
- The U.S. Department of Agriculture will provide \$100 million for the Agriculture and Food Research Initiative competitive grants program to enhance application of advanced technology, including AI, in agricultural systems.
- The National Institutes of Health will invest \$50 million for new research on chronic diseases using AI and related approaches.
- In regards to Defense AI R&D, DARPA is investing \$459 million in AI R&D, an increase of \$50 million from FY 2020, and the Department of Defense’s Joint AI Center is increasing its budget from \$242 million in FY 2020 to \$290 million in FY 2021.
- **BACKGROUND:** President Trump launched the American AI Initiative, the United States national strategy for AI leadership, in February 2019.
 - The American AI Initiative directed Federal agencies to prioritize artificial intelligence in their annual budget requests. The FY 2021 budget delivers on this request.
 - The Initiative also called for the development of the first ever agency-by-agency report of nondefense AI R&D spending. This report identified \$1 billion in nondefense R&D for FY 2020, establishing a benchmark for measuring nondefense AI R&D budgets in the future.

QUANTUM INFORMATION SCIENCE: President Trump’s FY 2021 Budget greatly bolsters Federal QIS R&D funding with aggregate investment across key agencies increasing by more than 50 percent relative to the FY 2020 Budget, putting QIS R&D on the path to double by 2022.

- National Science Foundation investment in QIS research will double to \$230 million, an additional \$120 million over FY 2020.
- The Department of Energy Office of Science spending on QIS research will increase to \$237 million, which will boost QIS efforts at the national laboratories and in academia and industry. This represents a nearly \$70 million increase over FY 2020.
- The President’s Budget includes \$25 million for the Department of Energy Office of Science to support early stage research for a quantum internet.
 - The development of a network of quantum computers and quantum devices holds promise for creating new technologies, improving the security of our communications and allowing dramatic advances in computing.
 - The White House Office of Science and Technology Policy’s National Quantum Coordination Office issued a [*Strategic Vision for America’s Quantum Networks*](#), which

provides the QIS research community with specific recommendations to focus quantum internet R&D activities.

- **BACKGROUND:** In December 2018, President Trump signed into law the bipartisan National Quantum Initiative Act, which greatly accelerated QIS R&D investment and coordination.
 - The FY 2020 Budget jumpstarted the R&D spending called for by the legislation with at least half a billion dollars for QIS R&D across the Federal Government.
 - As directed by the legislation, the White House established the National Quantum Coordination Office to harmonize QIS efforts across the Federal agencies.

CUTS TO BASIC RESEARCH: Basic and applied research funding would drop by \$7.9 billion or 9.1 percent. "Total R&D would see a commensurate drop as well. Both defense and civilian programs would be affected," writes Hourihan of AAAS. "The White House is recommending \$37 billion less for nondefense spending this year, and \$1.6 trillion less over the next decade . . . Congress has repeatedly rejected such recommendations in the past, and there's little chance the outcome will be any different this time around." Lewis-Burke Associates notes that the request "deviates from the [bipartisan] budget agreement by proposing \$590 billion for non-defense programs, a cut of \$52 billion or 5 percent compared to FY 2020 instead of growing the budget by about 1 percent to \$634.5 billion.

President's Budget: The President's Budget sets trade, defense, energy, deregulation as key goals. It is posted on the Office of Management and Budget website <https://www.whitehouse.gov/omb/budget/>

President Sign a Bill on Veterans Careers in STEM: President Trump signed a bill on February 11, 2020 supporting military veterans pursuing careers in the science and technology field. Supporting Veterans in STEM Careers Act (S.153) was a bi-partisan effort by Sens. Amy Klobuchar, D-Minn., and Marco Rubio, R-Fla. The bill will assist veterans reentering the workforce by directing the National Science Foundation to encourage them to pursue careers in science, technology, engineering and math (STEM).

"Our veterans come from all walks of life to serve our nation – and they bring with them a wealth of experience when they return to civilian life. Now that the Supporting Veterans in STEM Careers Act has passed the House and Senate and is headed to the President's desk, we are one step closer to providing veterans the benefits of well-paying jobs in science, technology, engineering, and math, and helping employers better meet their hiring needs. By supporting veterans through STEM career training, we not only help them to succeed, but also to strengthen our nation and our economy," Klobuchar said in a statement released by her office last year.

Department of Energy EERI Budget Underspent: "It seems that EERE has been slow to spend," Rep. Bill Foster (D-Ill.), a physicist who chairs the House Science investigations subcommittee, [said in opening a hearing](#). EERE carried over \$823 million -- more than a third of its FY 2019 budget -- into the current fiscal year. Defending DOE, [Assistant Secretary Daniel Simmons](#) (near right image, above) said that in the current fiscal year, "EERE has instituted a more rigorous scenario planning process to reconcile conflicting House and Senate marks in order to mitigate delay in finalizing our [funding opportunity] topics." As a result, DOE in January "announced nearly \$300 million in funding for research and development of sustainable transportation resources and technologies." He added: "One of my top priorities upon confirmation was to address the staffing needs within EERE." The committee full report is [posted on the website https://science.house.gov/imo/media/doc/EERE%20FY18%20SETO%20FOA%20Staff%20Report.pdf](https://science.house.gov/imo/media/doc/EERE%20FY18%20SETO%20FOA%20Staff%20Report.pdf)

NSF Testimony on SBIR/STTR Programs: Dawn Tilbury, assistant director for engineering at the National Science Foundation, [gently pushed back](#) against some provisions in H.R. 3774, a bipartisan

measure introduced last July to improve the federal Small Business Innovation Research and Technology Transfer (SBIR-STTR) programs. Two sections give "high priority" to manufacturing R&D and cybersecurity. "NSF appreciates the flexibilities provided by the current program," she said, but "by concentrating funding in selected areas, other meritorious proposals would go unfunded and lead to fewer innovations." On adding a third phase of funding for awardees, she pointed out that Phase IIB already "helps bridge the gap in funding between Phase II and ultimate commercialization." Tilbury cited "multiple" existing outreach efforts to underrepresented groups: Accelerating Women And under-Represented Entrepreneurs (AWARE); Culturally Relevant Enterprise Development (CRED); and Innovative Postdoctoral Entrepreneurial Research Fellowship (I-PERF), a NSF-ASEE partnership "to support underrepresented scientists and engineers in postdoctoral fellowships in startups." However, Science Committee Chair Eddie Bernice Johnson (D-Tex.) indicated more may be needed. The National Academies found that "agencies were doing a good job in meeting the statutory goals, except when it came to achieving increased women and minority participation in SBIR and STTR." The status quo, she said, "is not good enough." A copy of the testimony is posted on the website <https://science.house.gov/imo/media/doc/Tilbury%20Testimony.pdf>

Quantum Information Science: The Air Force Research Laboratory - Information Directorate (AFRL/RI) is soliciting white papers under this Broad Agency Announcement (BAA) for research, design, development, concept testing, evaluation, experimentation, integration and delivery of Quantum Information Sciences supporting the implementation and use of Command, Control, Communications, Computers & Intelligence (C4I)-related information and communications technologies and techniques. In particular, this effort seeks to advance and assess advanced algorithm designs and technologies harnessing emerging quantum computing techniques to support AFRL/RI's C4I mission. The BAA is included in the Grant Opportunity section below and also posted on the website https://beta.sam.gov/opp/dd6cccb1a9424440b7f0ff1d60ba9b7b/view?keywords=intelligence&sort=-modifiedDate&index=opp&is_active=true&page=1.

NSF-Simons Research Initiative on Deep Learning: The theoretical understanding of Deep Learning "remains an important emerging research field," the National Science Foundation says, and "a convergent effort from mathematicians, statisticians, electrical engineers, and theoretical computer scientists is needed." So the agency is teaming up with the Simons Foundation Division of Mathematics and Physical Sciences to sponsor new research collaborations in "the general area of Mathematical and Scientific Foundations of Deep Learning." NSF estimates that \$10,000,000 will be available to support two projects of five years duration each. The RFP, also included in the Grant Opportunity section below, is posted on the website https://www.nsf.gov/pubs/2020/nsf20540/nsf20540.htm?org=NSF#budg_cst_shr_txt

Webinar and Events

Event: Uncovering novel protein biomarkers in drug discovery and development: Targeting disease diagnosis and drug response monitoring

Sponsor: SCIENCE; AAAS

When: February 19, 2020; 12:00 PM – 1.00 PM

Website: https://view6.workcast.net/register?cpak=8464815952094122&referrer=Blast3&et_rid=285476668&et_cid=3204572

Brief Description: Protein biomarkers are increasingly used in clinical research to identify protein signatures that can predict outcomes and responses, effectively stratify patient populations, and provide

insights into the biology of disease. Consequently, some pharmaceutical companies are including protein biomarker programs in their drug discovery and development processes, to identify early diagnostic markers of disease that may also advance our understanding of disease biology and potentially identify novel drug targets. In addition, protein biomarkers may serve as essential tools to monitor the effects of therapeutic interventions, even in advance of clinical endpoint observations. Recent developments in multiplex technologies that enable high-throughput analysis of many proteins simultaneously, while using minimal volumes of biological samples, are accelerating the utility of proteomics, and have the potential to support pharmaceutical development across all aspects of the process, from target discovery to postmarket surveillance. This webinar will present two recent examples that span this range of applications, demonstrating how novel diagnostic biomarkers of early disease development and markers for treatment response in patients can be uncovered.

To Join the Webinar: Visit above URL.

Event: Navigating the NIH-NSF Divide for Rehabilitation Researchers

Sponsor: NSF

When: February 19, 2020 1:00 PM – 2.30 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=299966&org=NSF

Brief Description: NSF and the National Institutes of Health (NIH) are hosting a webinar titled “Navigating the NIH-NSF Divide for Rehabilitation Researchers” on Wednesday, February 19, from 1:00 to 2:30 p.m. ET. Program directors will discuss relevant programs and where they connect and diverge.

To Join the Webinar: Space is limited, so please [register for the webinar](#) in advance.

Event: I-Corps Hubs Webinars

Sponsor: NSF

When: February 20, 2020; 1.00 PM – 2.00 PM

March 3, 2020 12.00 PM – 1.00 PM

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=299676&org=NSF

Brief Description: The National Science Foundation (NSF) cordially invites you to join an **I-Corps Hubs Webinar** to learn more about the Innovation Corps (I-Corps™) Hubs program. NSF I-Corps Hubs will form the backbone of the National Innovation Network and will work collaboratively to create and sustain a national innovation ecosystem.

During the webinar, Program Director Ruth Shuman will discuss the program and answer questions.

The presentation portion of the webinar will be recorded and posted on the [I-Corps website](#). If you have questions before or during the webinar, please send them to I-Corps@nsf.gov.

To Join the Webinar: Click on the Register link at the above URL webpage

Event: NSF Distinguished Lecture Series in Mathematical and Physical Sciences for 2019-20

Sponsor: NSF

When: Various; Please see below.

Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=299152&org=NSF

Brief Description: These lectures will be held at the National Science Foundation, 2415 Eisenhower Ave., Alexandria, VA 22314. Advance sign-up requests are required for preparation of visitor passes by emailing the contact below. Guidelines for visiting NSF are at <https://www.nsf.gov/about/visit/>

March 23, 2020 2:00 PM to March 23, 2020 3:00 PM

May 4, 2020 2:00 PM to May 4, 2020 3:00 PM

June 11, 2020 2:00 PM to June 11, 2020 3:00 PM

To Join the Webinar: Please register at the above URL.

Event: Public Workshop - Evolving Role of Artificial Intelligence in Radiological Imaging

Sponsor: FDA

When: February 25-26, 2020; 8.00 AM – 5.30 PM

Website: https://www.fda.gov/medical-devices/workshops-conferences-medical-devices/public-workshop-evolving-role-artificial-intelligence-radiological-imaging-02252020-02262020?utm_campaign=2019-12-03%20CDRH%20New&utm_medium=email&utm_source=Eloqua

Brief Description: The Food and Drug Administration (FDA) is announcing the following public workshop entitled "Evolving Role of Artificial Intelligence in Radiological Imaging." The intent of this public workshop is to discuss emerging applications of Artificial Intelligence (AI) in radiological imaging including AI devices intended to automate the diagnostic radiology workflow as well as guided image acquisition. The purpose of the workshop is to work with interested stakeholders to identify the benefits and risks associated with use of AI in radiological imaging. We also plan to discuss best practices for the validation of AI-automated radiological imaging software and image acquisition devices. Validation of device performance with respect to the intended use is critical to assess safety and effectiveness.

To Join the Webinar: Please register at the above URL.

Grant Opportunities

National Science Foundation

**Grant Program: Small Business Technology Transfer Program Phase II (STTR Phase II)
Small Business Innovation Research Program Phase II (SBIR Phase II)**

Agency: National Science Foundation NSF 20-546 NSF 20-545

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20546/nsf20546.htm>
<https://www.nsf.gov/pubs/2020/nsf20545/nsf20545.htm>

Brief Description: A small business may apply for a National Science Foundation (NSF) Phase II Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) award only if it has been received a NSF Phase I award, and only for continued research toward commercialization of the technology developed under the Phase I award.

The Phase II funding amount has increased to a maximum of \$1,000,000 to better support the nation's startups and small businesses, as part of the recent federal adjustment for inflation. This amount includes up to \$50,000 to be used by the Phase II awardee for commercial assistance under the SBIR Technical and Business Assistance (TABAs) legislation. See section A.5, line G.6 of this document for details.

Small businesses are eligible to submit a Phase II proposal between six and twenty-four months after the start date of their relevant NSF SBIR/STTR Phase I award. Reference the Phase I award notice for the exact start date of the Phase I award. Proposals submitted outside of their eligible Phase II timeframe may be returned without review. *The proposal submission system (Fastlane) will shut down at 5:00 pm "proposer's time" on the submission window closing date. See section V.A of this document for more details.*

The STTR program solicits proposals from the small business sector consistent with NSF's mission to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.

The SBIR program solicits proposals from the small business sector consistent with NSF's mission to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.

Awards: Fixed Amount Cooperative Agreement

SBIR Anticipated Funding Amount: \$10,000,000 to \$15,000,000

Anticipated Funding Amount: \$110,000,000

Proposal Submission Window: February 14, 2020 - March 05, 2020; March 06, 2020 - June 04, 2020
June 05, 2020 - September 03, 2020; September 04, 2020 - December 03, 2020

Contacts: Contact Your NSF STTR Phase I Program Officer, telephone: 703-292-8050,
email: sbir@nsf.gov

Contact Your NSF SBIR Phase I Program Officer, telephone: 703-292-8050, email: sbir@nsf.gov

Grant Program: Foundational Research in Robotics

Agency: National Science Foundation NSF PD 20-144Y

RFP Website:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505784&org=NSF&sel_org=NSF&from=fund

Brief Description: The Foundational Research in Robotics (Robotics) program supports research on robotic systems that exhibit significant levels of both computational capability and physical complexity. For the purposes of this program, a robot is defined as intelligence embodied in an engineered construct, with the ability to process information, sense, and move within or substantially alter its working environment. Here intelligence includes a broad class of methods that enable a robot to solve problems or make contextually appropriate decisions. Research is welcomed that considers inextricably interwoven questions of intelligence, computation, and embodiment. Projects may also focus on a distinct aspect of intelligence, computation, or embodiment, as long as the proposed research is clearly justified in the context of a class of robots.

The focus of the Robotics program is on foundational advances in robotics. Robotics is a deeply interdisciplinary field, and proposals are encouraged that explore the full range of fundamental engineering and computer science research challenges arising in robotics. However, all proposals must convincingly explain how a successful outcome will enable transformative new robot functionality or substantially enhance existing robot functionality. The proposal should clearly articulate how the intellectual contribution of the proposed work addresses fundamental gaps in robotics. Meaningful experimental validation on a physical platform is strongly encouraged. Projects that do not represent a direct fundamental contribution to robotics should not be submitted to the Robotics program.

Potential investigators are strongly encouraged to discuss their projects with a Robotics Program Officer before submission. Non-compliant proposals may be returned without review.

Awards: Robotics proposals submitted to other program announcements or solicitations, including the Faculty Early Career Development Program (CAREER), must meet the respective deadlines of those programs; please refer to the deadline dates specified in the appropriate announcement or solicitation. Proposals for EARly-concept Grants for Exploratory Research (EAGER), Rapid Response Research (RAPID) or Research Advanced by Interdisciplinary Science and Engineering (RAISE) can be submitted at any time, but Principal Investigators (PIs) must contact the cognizant Program Officer prior to submission.

Letter of Intent: Required by March 20, 2020

Proposal Submission Deadline: Program Will Accept Proposals Anytime After August 1, 2020

Contacts: Christopher Radhakisan S. Baheti ENG/ECCS Jordan M. Berg ENG/CMMI
David Corman CISE/CNS Irina Dolinskaya ENG/CMMI

Grant Program: Reproducible Cells and Organoids via Directed- Differentiation Encoding (RECODE)

Agency: National Science Foundation NSF 20-541

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20541/nsf20541.htm>

Brief Description: The National Science Foundation (NSF) Division of Chemical, Bioengineering, Environmental and Transport Systems (CBET), seeks proposals that elucidate mechanisms of, and develop strategies to, direct the differentiation of undifferentiated cells into mature, functional cells or organoids. Projects responsive to this solicitation must aim to establish a robust and reproducible set of differentiation design rules, predictive models, real-time sensing, control, and quality assurance methods, and integrate them into a workable differentiation strategy. They must develop a fundamental understanding of how cells develop, including mechanisms, molecular machinery, dynamics, and cell-cell interactions, and use this understanding to manipulate cells purposefully. Investigators can choose any undifferentiated cell type, from any animal species, as a starting point and choose any appropriate functional product (cell, organoid, etc.) with real-world relevance. This solicitation parallels NSF's investment in *Understanding the Rules of Life (URoL): Predicting Phenotype*, NSF's Big Idea focused on predicting the set of observable characteristics (phenotype) of an organism based on its genetic makeup and the nature of its environment and applies it to understanding and accomplishing the intentional and guided differentiation of an undifferentiated cell into cells, organoids or tissues with predetermined activities and functions.

The convergence of many disciplines is necessary to answer the fundamental questions and devise the tools needed to realize truly deterministic cell induction and differentiation strategies. As such, investigators are encouraged to form interdisciplinary teams with expertise in developmental biology, stem cell biology, cell biology, engineering, synthetic and systems biology, computation, sensing, and physics. Proposals will not be responsive to this solicitation if they address only one aspect of the differentiation process or aim to create a functional living product without improving our understanding of the mechanisms that underlie developmental processes. The solicitation will support teams of three or more PI/co-PIs and senior personnel. Proposals with only one PI or one PI with one other senior personnel are not permitted.

Awards: Standard grants. Anticipated Funding Amount: \$5,000,000

Letter of Intent: Required by March 02, 2020

Proposal Submission Deadline: April 30, 2020

Contacts: Steven W. Peretti, telephone: (703) 292-7029, email: speretti@nsf.gov

- Aleksandr L. Simonian, telephone: (703) 292-2191, email: asimonia@nsf.gov
- Leon Esterowitz, telephone: (703) 292-7942, email: lesterow@nsf.gov

Grant Program: NSF-Simons Research Collaborations on the Mathematical and Scientific Foundations of Deep Learning (MoDL)

Agency: National Science Foundation NSF 20-540

RFP Website: https://www.nsf.gov/pubs/2020/nsf20540/nsf20540.htm?org=NSF#budg_cst_shr_txt

Brief Description: The National Science Foundation Directorates for Mathematical and Physical Sciences (MPS), Computer and Information Science and Engineering (CISE), Engineering (ENG), and the Simons Foundation Division of Mathematics and Physical Sciences will jointly sponsor up to two new research collaborations consisting of mathematicians, statisticians, electrical engineers, and theoretical computer scientists. Research activities will be focused on explicit topics involving some of the most challenging questions in the general area of Mathematical and Scientific Foundations of Deep Learning. Each collaboration will conduct training through research involvement of recent doctoral degree recipients, graduate students, and/or undergraduate students from across this multi-disciplinary spectrum. Annual meetings of the Principal Investigators (“PIs”) and other principal researchers involved in the collaborations will be held at the Simons Foundation in New York City. This program complements NSF's [National Artificial Intelligence Research Institutes](#) program by supporting collaborative research

focused on the mathematical and scientific foundations of Deep Learning through a different modality and at a different scale.

Awards: Continuing grants. Anticipated Funding Amount: \$20,000,000

NSF estimates that \$10,000,000 will be available to support two projects of five years duration each. The Simons Foundation will contribute up to \$10,000,000 to support the same two projects over the five-year duration of the awards. NSF and the Simons Foundation expect to co-fund each of the two projects, and that each project will have an annual budget of up to \$2,000,000 combined from both sources.

Letter of Intent: Required by March 20, 2020

Proposal Submission Deadline: April 30, 2020

Contacts: Christopher W. Stark, MPS/DMS, telephone: (703) 292-4869, email: cstark@nsf.gov

- Radhakisan S. Baheti, ENG/ECCS, telephone: (703) 292-8339, email: rbaheti@nsf.gov
 - Funda Ergun, CISE/CCF, telephone: (703) 292-2216, email: fergun@nsf.gov
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Grant Program: Computer Science for All (CSforAll: Research and RPPs)

Agency: National Science Foundation NSF 20-539

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20539/nsf20539.htm>

Brief Description: This program aims to provide *all* U.S. students with the opportunity to participate in computer science (CS) and computational thinking (CT) education in their schools at the preK-12 levels. With this solicitation, the National Science Foundation (NSF) focuses on both research and researcher-practitioner partnerships (RPPs) that foster the research and development needed to bring CS and CT to all schools. Specifically, this solicitation aims to provide (1) **high school teachers** with the preparation, professional development (PD) and ongoing support they need to teach rigorous computer science courses; (2) **preK-8 teachers** with the instructional materials and preparation they need to integrate CS and CT into their teaching; and (3) **schools and districts** with the resources needed to define and evaluate multi-grade pathways in CS and CT.

"Building Computational Literacy" is one of four pathways identified in the 2018-2023 five-year plan for achieving the Federal government's three goals for STEM education, titled [*Charting A Course for Success: America's Strategy for STEM Education*](#). A central purpose of this pathway is to "advance CT as a critical skill for today's world." "Make CT an integral element of all education" is one of three objectives under that pathway—and three key Federal actions are identified in the plan as needed to achieve this objective.

- "Increase the number of Federal funding and partnership opportunities that include CT as a selection criterion."
- "Support research and disseminate best practices on effective methods for teaching CT and computer science to young children as part of the STEM curriculum."
- "Identify and share education practices and curriculum materials that are effective at developing CT."

Awards: Standard grants. Anticipated Funding Amount: \$20,000,000

Approximately 8 small RPPs, 7 medium RPPs, 3 large RPPs, and 9 research awards.

Letter of Intent: Not Required

Proposal Submission Deadline: April 13, 2020

Contacts: Jeffrey Forbes, CISE/CNS, telephone: (703) 292-8950, email: jforbes@nsf.gov

- Michael Ford, EHR/DRL, telephone: (703) 292-5153, email: miford@nsf.gov
 - Allyson Kennedy, CISE/CNS, telephone: (703) 292-8950, email: aykenned@nsf.gov
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Grant Program: Spectrum and Wireless Innovation enabled by Future Technologies (SWIFT)

Agency: National Science Foundation NSF 20-537

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20537/nsf20537.htm>

Brief Description: The National Science Foundation's Directorates for Engineering (ENG), Computer and Information Science and Engineering (CISE), Mathematical and Physical Sciences (MPS), and Geosciences (GEO) are coordinating efforts to identify new concepts and ideas on Spectrum and Wireless Innovation enabled by Future Technologies (SWIFT). A key aspect of this new solicitation is its focus on effective spectrum utilization and/or coexistence techniques, especially with passive uses, which have received less attention from researchers. Coexistence is when two or more applications use the same frequency band at the same time and/or at the same location, yet do not adversely affect one another. Coexistence is especially difficult when at least one of the spectrum users is passive, i.e., not transmitting any radio frequency (RF) energy. Examples of coexisting systems may include passive and active systems (e.g., radio astronomy and 5G wireless communication systems) or two active systems (e.g., weather radar and Wi-Fi). Breakthrough innovations are sought on both the wireless communication hardware and the algorithmic/protocol fronts through synergistic teamwork. The goal of these research projects may be the creation of new technology or significant enhancements to existing wireless infrastructure, with an aim to benefit society by improving spectrum utilization, beyond mere spectrum efficiency. The SWIFT program seeks to fund collaborative team research that transcends the traditional boundaries of individual disciplines.

Awards: Standard grants.

Approximately 6 awards of up to \$500,000 each for 3 years for SMALL team efforts.

Approximately 6 awards of up to \$1,500,000 each for 3 years for LARGE team efforts.

Anticipated Funding Amount: \$12,000,000

Letter of Intent: Not Required

Proposal Submission Deadline: April 03, 2020

Contacts: Jenshan Lin, ENG/ECCS, telephone: (703) 292-8339, email: jenlin@nsf.gov

- Monisha Ghosh, CISE/CNS, telephone: (703) 292-8950, email: mghosh@nsf.gov
- Alexander Sprintson, CISE/CNS, telephone: (703) 292-8950, email: asprints@nsf.gov

Grant Program: Division of Integrative Organismal Systems Core Programs

Agency: National Science Foundation NSF 20-536

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20536/nsf20536.htm>

Brief Description: The Division of Integrative Organismal Systems (IOS) **Core Programs Track** supports research aimed at understanding why organisms are structured the way they are and function as they do. Proposals are welcomed in all of the core scientific program areas supported by the Division of Integrative Organismal Systems (IOS). Areas of inquiry include, but are not limited to, developmental biology and the evolution of developmental processes, nervous system development, structure, modification, function, and evolution; biomechanics and functional morphology, physiological processes, symbioses and microbial interactions, interactions of organisms with biotic and abiotic environments, plant and animal genomics, and animal behavior. Proposals should focus on organisms as a fundamental unit of biological organization. Principal Investigators (PIs) are encouraged to apply systems approaches that will lead to conceptual and theoretical insights and predictions about emergent organismal properties.

The Rules of Life Track supports integrative proposals that span the subcellular and cellular scales normally funded by MCB to the organ, tissue, organismal, and group scale typically funded by IOS, to population, species, community and ecosystem scales typically funded by DEB. Rules of Life proposals may also include enabling infrastructure through joint submission with DBI. Discovery of fundamental principles and enabling infrastructure will advance understanding and further predict how

key properties of living systems emerge from the interaction of genomes, phenotypes, and developmental, social and environmental context across space and time. This track provides opportunities to advance understanding of the Rules of Life by new mechanisms for review and funding of proposals that span two or more divisions in the Biological Sciences Directorate.

Awards: Standard grants. Anticipated Funding Amount: \$60,000,000

Letter of Intent: Not Required

Proposal Submission Deadline: Proposals Accepted Anytime

Contacts: Behavioral Systems Program Directors, telephone: (703) 292-8423, email: IOSBSC@nsf.gov

- Developmental Systems Program Directors, telephone: (703) 292-8417, email: IOSDSC@nsf.gov
 - Neural Systems Program Directors, telephone: (703) 292-8421, email: IOSNSC@nsf.gov
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Grant Program: International Research and education Network Connections (IRNC)

Agency: National Science Foundation NSF 20-535

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20535/nsf20535.htm>

Brief Description: The International Research and education Network Connections (IRNC) Base program supports high-performance network connectivity required by international science and engineering research and education collaborations involving the NSF research community. High-performance network connections and infrastructure funded by this program are intended to support science and engineering research and education applications, and preference will be given to solutions that provide the best economy of scale and demonstrate the ability to support the largest communities of interest with the broadest services. Funded projects will assist the U.S. research and education community by enabling state-of-the-art international network services and access to increased collaboration and data services. NSF expects to make 3 to 10 awards in production R&E network infrastructure; 1 to 3 awards in international testbeds; and 1 award in Engagement.

Awards: Standard and continuing grants. Anticipated Funding Amount: \$20,000,000 to \$50,000,000

The estimated number of awards is 5-14 in total: 3-10 IRNC: Core awards; 1-3 IRNC: Testbed awards, and 1 IRNC: ENgagement award.

Because of the nature and geographic extent of the efforts involved, interested parties are encouraged to form consortia of organizations that can work together to provide the needed services. Consortia may consist of any number of U.S. and foreign, profit and non-profit entities. The award(s) resulting from responses to this solicitation will be made to U.S. organizations as cooperative agreements or standard or continuing grants. Any award will be for a maximum of five years.

Each program area will support awards pursuant to the following budget and duration:

- IRNC: Core awards will be supported at up to \$1,400,000 per year for up to 5 years;
- IRNC: Testbed awards will be supported at up to \$1,000,000 per year for up to 3 years; and,
- IRNC: ENgagement awards will be supported at up to \$1,000,000 per year for up to 5 years.

Letter of Intent: Not Required

Proposal Submission Deadline: April 01, 2020

Contacts: Kevin L. Thompson, telephone: (703) 292-4220, email: kthompso@nsf.gov

Grant Program: Principles and Practice of Scalable Systems (PPoSS)

Agency: National Science Foundation NSF 20-534

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20534/nsf20534.htm>

Brief Description: A key focus of the design of modern computing systems is performance and scalability, particularly in light of the limits of Moore's Law and Dennard scaling. To this end, systems

are increasingly being implemented by composing heterogeneous computing components and continually changing memory systems as novel, performant hardware surfaces. Applications fueled by rapid strides in machine learning, data analysis, and extreme-scale simulation are becoming more domain-specific and highly distributed. In this scenario, traditional boundaries between hardware-oriented and software-oriented disciplines increasingly are blurred.

Achieving scalability of systems and applications will therefore require coordinated progress in multiple disciplines such as computer architecture, high-performance computing (HPC), programming languages and compilers, security and privacy, systems, theory, and algorithms. Cross-cutting concerns such as performance (including, but not limited to, time, space, and communication resource usage and energy efficiency), correctness and accuracy (including, but not limited to, emerging techniques for program analysis, testing, debugging, probabilistic reasoning and inference, and verification), security and privacy, robustness and reliability, domain-specific design, and heterogeneity must be taken into account from the outset in all aspects of systems and application design and implementation.

The aim of the Principles and Practice of Scalable Systems (PPoSS) program is to support a community of researchers who will work symbiotically across the multiple disciplines above to perform basic research on scalability of modern applications, systems, and toolchains. The intent is that these efforts will foster the development of principles that lead to rigorous and reproducible artifacts for the design and implementation of large-scale systems and applications across the full hardware/software stack. These principles and methodologies should simultaneously provide guarantees on correctness and accuracy, robustness, and security and privacy of systems, applications, and toolchains. Importantly, as described below, **PPoSS specifically seeks to fund projects that span the entire hardware/software stack** and will lay the groundwork for sustainable approaches for engineering highly performant, scalable, and robust computing applications.

Awards: Standard grants.

Planning Grants: Approximately 15 awards will be made in FY 2020, 8 awards in FY 2021, and 4 awards in FY 2022, pending availability of funds and quality of proposals received.

LARGE Grants: Approximately 4 awards will be made each year in FY 2021, FY 2022, FY 2023, and FY 2024, pending availability of funds and quality of proposals received.

Anticipated Funding Amount: \$86,750,000

Planning Grants: Up to \$250,000 per award with duration up to 1 year.

LARGE Grants: Up to \$1,000,000 per year with duration up to 5 years

Letter of Intent: Not Required

Proposal Submission Deadline: March 30, 2020: Planning grants only

January 25, 2021 for Planning grants and LARGE grants

Contacts: Funda Ergun, Program Director, CISE/CCF, telephone: (703) 292-2216,

email: fergun@nsf.gov

- Anindya Banerjee, Program Director, CISE/CCF, telephone: (703) 292-7885, email: abanerje@nsf.gov
- Vipin Chaudhary, Program Director, CISE/OAC, telephone: (703) 292-2254, email: vipchaud@nsf.gov

Grant Program: Enabling Discovery through GENomic Tools (EDGE)

Agency: National Science Foundation NSF 20-532

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20532/nsf20532.htm>

Brief Description: The Enabling Discovery through GENomic Tools (EDGE) program supports genomic research that addresses the mechanistic basis of complex traits in diverse organisms within the context (environmental, developmental, social, and/or genomic) in which they function. The EDGE program also

continues to support the development of innovative tools, technologies, resources, and infrastructure that advance biological research focused on the identification of the causal mechanisms connecting genes and phenotypes. EDGE is designed to provide support for (1) the development of tools, approaches, and infrastructure aimed at testing cause and effect hypotheses between gene function and phenotypes in diverse plants, animals, microbes, viruses, or fungi for which these methods are presently unavailable, and (2) hypothesis-driven research that tests cause and effect relations between genotype(s) and phenotypes in non-model plants, animals, microbes, viruses, or fungi.

Awards: Standard grants. Anticipated Funding Amount: \$10,000,000

Letter of Intent: Not Required

Proposal Submission Deadline: Proposals Accepted Anytime

Contacts: Edda (Floh) Thiels, telephone: (703) 292-8167, email: ethiels@nsf.gov

- Douglas K. (Patrick) Abbot, telephone: (703) 292-7820, email: dabbot@nsf.gov
 - Ford Ballantyne, telephone: (703) 292-8037, email: fballant@nsf.gov
-

Grant Program: Algorithms for Threat Detection (ATD)

Agency: National Science Foundation NSF 20-531

RFP Website: <https://www.nsf.gov/pubs/2020/nsf20531/nsf20531.htm>

Brief Description: The Algorithms for Threat Detection (ATD) program will support research projects to develop the next generation of mathematical and statistical algorithms for analysis of large spatiotemporal datasets with application to quantitative models of human dynamics. The program is a partnership between the Division of Mathematical Sciences (DMS) at the National Science Foundation (NSF) and the National Geospatial Intelligence Agency (NGA).

Awards: Standard grants. Anticipated Funding Amount: \$3,000,000

Letter of Intent: Not Required

Proposal Submission Deadline: March 18, 2020

Contacts: Leland M. Jameson, Program Director, NSF MPS/DMS, telephone: (703) 292-4883, email: ljameson@nsf.gov

- Janet P. Striuli, Program Director, NSF MPS/DMS, teleph: (703) 292-2858, email: jstriuli@nsf.gov
 - John Greer, Program Director, National Geospatial Intelligence Agency, NGA, telephone: (571) 557-2944, email: John.B.Greer@nga.mil
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National Institutes of Health

Grant Program: Optimizing Natural Systems for Remediation: Utilizing Innovative Materials Science Approaches to Enhance Bioremediation (R01 Clinical Trial Not Allowed)

Agency: National Institutes of Health RFA-ES-20-004

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-ES-20-004.html>

Brief Description: The purpose of this FOA is to support innovative approaches to understand mechanisms of bioremediation. Bioremediation, for the purposes of this FOA, encompasses remediation using bacteria, archaea, algae, fungi, and/or plants to degrade, extract, or stabilize contaminants as part of a natural or constructed system. Applicants should assemble teams of researchers with expertise in bioremediation and materials science to propose integrated approaches to reduce the burden of contaminants in the environment. Through a transdisciplinary approach, applicants should elucidate mechanisms of bioremediation and use that knowledge to address challenging scenarios for which bioremediation may be a solution. It is expected the major outcomes of this program will be the elucidation of mechanisms impacting bioremediation success and stimulation of innovative

transdisciplinary approaches incorporating materials science to optimize bioremediation. Overall, this program will facilitate cutting-edge transdisciplinary science needed to advance research in bioremediation relevant to the goals of the SRP.

Applicants are encouraged to propose advanced approaches that combine a mechanistic understanding of bioremediation and materials science including, but not limited to:

- Utilization of nanotechnology-enabled frameworks to understand the basic structural properties of microorganisms/plants and to enhance bioremediation of hazardous substances;
- Utilization of machine learning to predict optimal conditions and pathways to apply innovative materials that stimulate bioaugmentation or to customize the design of new materials to enhance mechanistic understanding and effectiveness of bioremediation;
- Integration and analysis of ‘omics’ data from across several hazardous sites to discover new options for development of innovative materials for bioaugmentation/biostimulation;
- Development of controlled, engineered microenvironments to overcome biogeochemical/ecological limitations of biodegradation, to prevent formation of unintended byproducts, or to accommodate biodegradation of multiple contaminants;
- Employment of nanotech-derived devices and materials to investigate the mechanisms underlying bioremediation so that more effective remediation strategies could be created;
- Integration of novel materials science-enhanced bioamendment delivery with advanced site models to better understand biogeochemical and ecological mechanisms of bioremediation.

Awards: Application budgets should reflect the actual needs of the proposed project and are limited to \$200K direct costs per year.

Letter of Intent: March 20, 2020

Deadline: April 20, 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.

Grant Program: Collaborative Program Grant for Multidisciplinary Teams (RM1 - Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-103

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-103.html>

Brief Description: This funding opportunity announcement (FOA) encourages Collaborative Program Grant applications from institutions/organizations that propose to conduct research to address complex and challenging biomedical problems, important for the [mission of NIGMS](#), through deeply integrated, multidisciplinary research teams. The Collaborative Program Grant is designed to support research in which funding a team of interdependent investigators offers significant advantages over support of individual research project grants. Applications should address critical issues and be sufficiently challenging, ambitious, and innovative that objectives could not be achieved by individual investigators.

Successful Collaborative Program Grant applications will bring together scientists to apply complementary approaches to work on an important and well-defined problem. Applications may address any area of science within the [NIGMS mission](#), which is to support basic research that increases understanding of biological processes at a range of levels, from molecules and cells, to tissues, whole organisms, and populations. NIGMS also supports research in a limited number of clinical areas that affect multiple organ systems. Truly new interdisciplinary ideas for approaching significant biological problems are encouraged. Applications that bridge the research interests of more than one NIGMS

division are also encouraged, but must remain within the scope of the NIGMS mission. Research with the overall goal to gain knowledge about a specific organ or organ system, or the pathophysiology, treatment, or cure of a specific disease or condition will, in most cases, be more appropriate for another Institute or Center. Consultation with NIGMS staff (see below) prior to preparing an application is strongly [encouraged](#).

Applications submitted to this FOA are expected to propose a single, well-integrated research plan of sufficient scope, complexity, and impact to justify the investment of significant resources. Applicants are expected to describe a cohesive program with a single set of specific aims sufficient to accomplish program objectives that can be achieved within a maximum of ten years (one five-year program with one five-year competitive renewal). Program objectives that are unlikely to be achieved within ten years are not appropriate for this FOA.

Applications should be sufficiently challenging, ambitious, and innovative that the proposed research cannot be achieved by a single investigator or small group of investigators. Therefore, a multiple PD/PI application is required and applications must include a minimum of three and a maximum of six PD/PIs who are all necessary to provide sufficient research capacity and the relevant expertise to address the proposed scientific problem. Applications that propose extrapolations of a single line of research or propose parallel but independent advancement of different areas are not appropriate for this FOA.

Award: NIGMS anticipates supporting no more than 4-6 awards, corresponding to a total of \$10,000,000 (total costs) for fiscal year 2021.

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

Deadline: May 27, 2020; January 27, 2021; May 27, 2021; January 27, 2022; May 27, 2022; January 27, 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.

Grant Program: IDeA Networks of Biomedical Research Excellence (INBRE) (P20 Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-102

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-102.html>

Brief Description: The National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health (NIH) invites applications for Institutional Development Award (IDeA) Networks of Biomedical Research Excellence (INBRE) grants within IDeA-eligible states to independent biomedical research institutes and/or research institutions that award doctoral degrees in health-related sciences. INBRE applications represent collaboration between research intensive institutions, primarily undergraduate institutions (PUIs), community colleges, and Tribally Controlled Colleges and Universities (TCCUs).

This Funding Opportunity Announcement (FOA) builds on the successes of the INBRE program to augment and strengthen the state's biomedical research capacity. The primary goals of the INBRE program are to: 1) build on the established multi-disciplinary research network to strengthen the lead and partner institutions' biomedical research expertise and infrastructure; 2) build and increase the research base and capacity by providing support to faculty, postdoctoral fellows, and graduate students at the participating institutions; 3) provide research opportunities for students from PUIs, community colleges, and TCCUs and serve as a "pipeline" for these students to continue in biomedical research careers within IDeA states; and 4) enhance the science and technology knowledge of the state's workforce.

For the purposes of this FOA, “primarily undergraduate institutions” include U.S. two-year, four-year, masters-level, and small doctoral-granting colleges and universities that (1) grant baccalaureate degrees in NIH-supported fields, or provide programs of instruction for students pursuing such degrees with institutional transfers (e.g., two-year schools); (2) have undergraduate enrollment exceeding graduate enrollment; and (3) award an average of no more than 10 Ph.D. or D.Sc. degrees per year in biomedical and behavioral sciences.

The INBRE program seeks to promote the development and expansion of unique, innovative, state-of-the-art biomedical and behavioral research at institutions in IDeA-eligible states, encompassing the full spectrum of basic, clinical, and translational sciences. The NIH recognizes that the contributions from the institutions in IDeA-eligible states are important and essential in fulfilling the promise of the NIH research agenda. The intent of this FOA is to continue assisting these institutions to implement and use the technologies and other resources needed to conduct state-of-the-art biomedical and behavioral research and provide research experiences to students at baccalaureate institutions, community colleges, and TCCUs.

Award: Direct costs are limited to \$2.75 million per year, excluding facilities and administrative (F&A) costs on consortium arrangements. In addition, this FOA will provide one-time funds of up to \$250,000 in direct costs in the first year of the award for alteration and renovation to improve existing core laboratories, research laboratories and/or animal facilities at the PUIs, community colleges, and TCCUs.

Only one award will be made per IDeA-eligible state.

Letter of Intent: Not Required

Deadline: May 20, 2020; May 20, 2021; May 20, 2022

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

Grant Program: Environmental Health Sciences Core Centers (EHSCC) (P30 Clinical Trial Optional)

Agency: National Institutes of Health RFA-ES-20-006

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-ES-20-006.html>

Brief Description: The NIEHS Environmental Health Sciences Core Centers (EHS CC) Program is intended to bring together investigators currently funded by NIH or other Federal or non-Federal sources to enhance the effectiveness of existing research and extend the focus of research for the environmental health sciences. An EHS CC should support innovation and be on the cutting edge of science. It is expected that research activities will cross a variety of disciplines to bring multiple perspectives and approaches to bear on significant problems. It is expected that the interdisciplinary nature of an EHS CC will have a synergistic effect that results in greater depth, breadth, quality, innovation and productivity beyond what individual scientists would be likely to attain by working independently and as such lead to translational research opportunities. As intellectual hubs for environmental health research, the membership of EHS CC's is expected to be the thought leaders for the field as well as advance the goals of the NIEHS Strategic Plan (<http://www.niehs.nih.gov/about/strategicplan/>.)

The overall goals for the EHS CC Program are to enhance the capabilities of existing programs in environmental health sciences, assist with building programmatic and scientific capacity, lead in the development of novel research directions, recruit and groom future leaders in the field, and pioneer efforts in community engagement. The EHS CC grant provides facilities and resources to accelerate research along the spectrum from basic mechanistic and toxicological science to population and public health and dissemination. Moreover, with the release of the translational research (TR) framework for the

environmental health sciences (<https://www.niehs.nih.gov/translation>), it is expected that an EHS CC facilitate translational research that encompasses all aspects of an EHS CC. The TR framework is an innovative tool that incorporates the dynamic nature of environmental health research to inform and facilitate the use of scientific/public health advances across the translational spectrum to accelerate improving the health of individuals and the public.

Award: New or first-time applicants are limited to \$850,000 Direct Costs per year. Renewal applications are limited to \$1.0M Direct Costs per year. See Eligibility requirements.

Letter of Intent: April 18, 2020, March 16, 2021, March 14, 2022

Deadline: May 18, 2020, April 16, 2021, April 14, 2022.

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

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

Grant Program: Development of Innovative Informatics Methods and Algorithms for Cancer Research and Management (R21 Clinical Trial Optional)

Agency: National Institutes of Health RFA-CA-20-007

Companion Funding Opportunity:

- [RFA-CA-20-008](#), U01 Research Projects - Cooperative Agreements
- [RFA-CA-20-009](#), U24 Resource-Related Research Projects - Cooperative Agreements
- [RFA-CA-20-010](#), U24 Resource-Related Research Projects - Cooperative Agreements
- [RFA-CA-20-011](#), [R01](#) Research Project
- [RFA-CA-20-012](#), U01 Research Projects - Cooperative Agreements
- [RFA-CA-20-013](#), U24 Resource-Related Research Projects - Cooperative Agreements

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-CA-20-007.html>

Brief Description: This FOA encourages applications that involve the development of highly innovative methods and algorithms that support a wide range of cancer research, including discovery biology, population studies, as well as clinical and translational research. The emphasis will be on novelty and potential for impact on cancer research.

Some examples of needs that may be appropriate to this FOA include but are not limited to those listed below:

- Data acquisition methods, such as for laboratory equipment, wearable devices, and questionnaires;
- Data mining, data visualization, and data analysis;
- Data processing such as data compression, data provenance, and data wrangling;
- Data annotation;
- Data integration and workflow methods;
- Statistical methods, graph, and network theory approaches, and machine learning methods;
- Natural language processing and text mining;
- Clinical decision support and treatment planning;
- Methods to support next-generation clinical trials and clinical trial matching;
- Behavioral intervention;
- Interactive modeling and simulation.

Applications in support of methods and algorithms that address under-represented areas in the program portfolio are of particular interest. The list of funded projects is available at <https://itcr.cancer.gov/about-itcr/funded-projects>.

Awards: Direct costs are limited to \$275,000 over a two year period.

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

Deadline: June 9, 2020; November 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.

Grant Program: Biomedical Research Facilities (C06 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-20-086

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-086.html>

Brief Description: NIH recognizes that modern physical infrastructure is necessary for the conduct of cutting-edge research. As science progresses and new technologies become available, dedicated space is required to house specialized equipment and to carry out novel experimental protocols. Projects will vary and depend on the present institutional infrastructure and long-term institutional research plans. Focusing on the advancement of science through the modernization of physical space will be a common and integral feature of all proposed projects. When completed, projects will have a significant institution-wide impact, bringing the research capacities and capabilities to a new level. An institution may request funds to modernize a core facility to create an environment required for research-driven specialized technological services. Likewise, funds may be requested to consolidate space for an institution-wide core which would provide streamlined workflows for contemporary multi-disciplinary investigations. Modernizing laboratory space used on a shared basis to meet the growing needs consistent with an institutional strategic vision for biomedical research is another example of a suitable request. A successful project will serve research teams and a broad range of research efforts.

Various factors are typically considered when developing or modernizing research infrastructure. For applications submitted to this FOA, defined research needs will drive the requests for modern engineering solutions. As science progresses and new technologies become available, required dedicated space must comply with relevant technical specifications to provide a well-controlled environment, to enable novel experimental approaches, and to house specialized equipment.

NIH recognizes the importance of all institutions of higher learning in contributing to the nation's research capacity. NIH intends to make available at least 25% of the funds to support projects from Institutions of Emerging Excellence (as defined in [42 USC 283k\(c\)\(2\)](#)). These institutions play a special role in advancing biomedical research as they leverage their research abilities to address problems of special relevance or unmet health needs. Often these institutions are in the geographical areas in which deficits in research resources and health-related services/technologies may adversely affect health status of the population. Serving individuals from disadvantaged backgrounds by carrying activities related to training, health services, or biomedical research contributes to protecting health of such populations. Such institutions often serve as centers for dissemination of health information, training development, and advancement of research. At times, low levels of NIH research funding and deficits in physical research infrastructure may curtail the full potential of these efforts.

It is expected that all projects - both from research-intensive institutions and Institutions of Emerging Excellence - will have long-term effect and benefit the broad biomedical research community at the applicant institution by providing a modern research environment, accessible on a shared basis.

Award: Application budgets are not limited, but need to reflect the actual needs of the proposed project. The maximum award budget is \$8,000,000. Applications with budget less than \$3,000,000 will not be considered. Since the scope of different projects will vary it is anticipated that the size of the awards will vary.

Letter of Intent: February 14, 2020

Deadline: March 17, 2020

All applications are due by 5:00 PM local time of applicant organization.

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

Grant Program: Silvio O. Conte Centers for Basic Neuroscience or Translational Mental Health Research (P50 Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-093

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-093.html>

Brief Description: The primary purpose of each Conte Center is to support a multidisciplinary team of leading basic neuroscience, translational neuroscience, and/or clinical neuroscience researchers engaged in a highly integrated and focused program directed at a well-defined and unified scientific question (hypothesis) or problem. The institute seeks both basic neuroscience Conte Centers as well as translational Conte Centers. A Conte Center need not include both basic neuroscience and translational research foci. The Conte Centers program continues to seek highly meritorious applications across the full spectrum of basic and translational research supported by the NIMH. Conte Centers should comprise a collaborative, cutting-edge, multidisciplinary research program conducted at multiple levels of analysis that would be difficult to undertake within the confines of a single laboratory or a small-scale collaboration.

The [NIMH Strategic Plan](#) was developed to inspire and support research that takes advantage of these recent technological advances and opportunities, and to bring into sharper focus questions and perspectives that will transform the diagnosis, treatment, and prevention of mental disorders. NIMH also encourages projects that address the fundamental mechanisms that cut across current diagnostic categories as outlined in the [Research Domain Criteria \(RDoC\)](#) project.

Potential applicants are also encouraged to consult the [report of the National Advisory Mental Health Council \(NAMHC\) Genomics Workgroup](#), which makes recommendations for areas of opportunity in genomics research to understand the genetic etiology of mental health disorders. Applicants should also consult [NOT-MH-18-058 Notice of Information: NIMH's Interest in Areas of Stress Biology Research](#) which clarifies NIMH's interest in the most rigorous approaches to understanding the impact of stressors on brain and behavior.

Award: Direct costs are limited to \$2 million in any one year.

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

Deadline: May 27, 2020, May 26, 2021, May 24, 2022

All applicants 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 corrections to errors found in the application during the submission process by the due date.

Grant Program: NIBIB Trailblazer Award for New and Early Stage Investigators (R21 Clinical Trial Optional)

Agency: National Institutes of Health PAR-20-084

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-084.html>

Brief Description: A Trailblazer project may be exploratory, developmental, proof of concept or have high risk-high impact goals. Importantly, the proposed research for this FOA may be technology design-directed and may or may not be hypothesis-driven. In the context of this FOA, innovation encompasses approaches to address well-defined, unmet biomedical research needs through the development of new methods, ideas, or technologies; early steps along the path toward delivery of a new capability or method;

and the integration of existing components in a previously unproven format. High-impact projects should transform our understanding or practice by applying an innovative approach to an important biomedical challenge. For projects supported by a Trailblazer Award, successful results should provide a solid foundation for further research under other funding mechanisms, such as the R01. Applicants will be considered ineligible for this funding opportunity if they have submitted an R01, R15 or any other R21 application, with NIBIB as the primary IC within the same review cycle. An awardee may not hold concurrent Trailblazer awards. All areas of research germane to the mission of the NIBIB are appropriate for the Trailblazer FOA (<https://www.nibib.nih.gov/research-funding>).

Trailblazer approaches are expected to differ substantially from current thinking or practice, therefore, extensive preliminary data demonstrating feasibility is an indication that the project is beyond the scope of this FOA. Reviewers' determinations of merit will rely instead on the conceptual framework, the level of innovation, and the potential to significantly advance our knowledge, understanding or practice. Applicants can provide appropriate justification for the proposed work through literature citations, data from other publicly available sources, or analytical and computational models. The proposed research will likely involve considerable risk that the work may not be successful, so applicants should clearly explain the significance of the work to allow the reviewers to determine whether the potential impact justifies these risks.

Award: Application budgets may not exceed \$400,000 direct costs over a maximum three-year funding period. No more than \$200,000 direct costs may be requested in any single year.

Letter of Intent: Not required

Deadline: [Standard dates](#) apply.

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

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

Grant Program: Engineering Next-Generation Human Nervous System Microphysiological Systems (R21 and R01 Clinical Trials Not Allowed)

Agency: National Institutes of Health PAR-20-082 (R21) PAR-20-055 (R01)

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-082.html>

<https://grants.nih.gov/grants/guide/pa-files/PAR-20-055.html>

Brief Description: The purpose of this FOA is to stimulate basic technology-focused research to develop next-generation human cell-derived microphysiological systems (MPS) and related assays with improved fidelity to complex human brain, spinal cord, and/or sensory end organ circuit physiology, which will ultimately facilitate analysis of higher order functional deficits relevant to complex nervous system diseases. This FOA is distinct from others that focus on optimization and scalability of assays for compound screening, although projects could, in principle, have utility for late stage evaluation of drug efficacy and toxicity. These models will have a multi-lineage, complex architecture representing the normal characteristics and functions of the relevant nervous system structure (e.g., sensory input systems, brain or spinal integrative systems, motor output systems) and will substantially exceed the state of the art in cellular maturation and integration, allowing reproducible measurement of human-relevant circuit-level activity under physiological conditions over a long period.

This FOA encourages innovative approaches that are first-in-class, those that propose to substantially exceed the state of the art in tissue organization and function. These can be high risk, high impact designs. Additionally, this FOA encourages approaches that aim to improve robustness and reproducibility of physiologically relevant circuit or supportive systems-level measures.

Award: 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. (for R21)

Letter of Intent: Not required

Deadline: [Standard dates](#) apply.

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

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

Grant Program: BRAIN Initiative: Biology and Biophysics of Neural Stimulation and Recording Technologies (R01 Clinical Trials Optional)

Agency: National Institutes of Health RFA-NS-20-006

RFP Website: <https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-20-006.html>

Brief Description: The current suite of BRAIN Initiative FOAs ranges from testing new concepts for large scale recording and modulation, developing and optimizing tools for invasive and non-invasive neuromodulation, to pre-clinical and clinical studies of next generation recording and modulation technologies. This FOA fills the gap in understanding how fields produced by stimulating technologies affect the brain at a basic cellular or circuit level and understanding the origin of biological signals recorded from the brain. The new stimulation, recording, and mapping tools developed within the BRAIN initiative provide an ample toolset that can now be employed to address this gap.

The goal of this FOA is two-fold: (1) To systematically characterize, model, and validate the neurobiological, cellular, and circuit responses of neuronal and non-neuronal cells in the central nervous system (CNS) to fields produced by neural stimulation, and (2) To understand the biological and bioinformatic content of signals recorded from neuronal and non-neuronal cells and circuits in terms of the shape, size, orientation, propagation, and location of signal generators at varying temporal/spatial scales. Proposed studies should lead to deeper understanding of how electrical and chemical activities in different populations of neurons and glia are represented in macroscopic-level measurements of brain structure and function. In this context, “validation” is defined as models at the cellular and local circuit level, however, models may span multiple scales from non-invasively applied fields down to electrical stimulation from micro and nanoscale devices. Proposed outcomes from these efforts may include: cell activation thresholds, sub-threshold changes to membrane voltage, cellular morphological changes, metabolic changes, changes in cell-cell interactions, the many possible aspects of local circuit plasticity in response to varied stimulation protocols, defining principles by which signals decay or amplify across scales, and/or understanding of the structure/function relationship of defined units in the brain using recording techniques.

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

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

Deadline: March 24, 2020, June 2, 2020, October 1, 2020, February 2, 2021, June 1, 2021, October 1, 2021, February 1, 2022, June 1, 2022, and October 3, 2022

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.

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.

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

**Grant Program: FY 2021 Defense University Research Instrumentation Program (DURIP)-
AFOSR Submission**

FY 2021 Defense University Research Instrumentation Program (DURIP)- ARMY Submission

FY 2021 Defense University Research Instrumentation Program (DURIP)- ONR Submission

Agency: Department of Defense AFOSR: FOA-AFRL-AFOSR-2020-0001

Dept of Army W911NF-20-S-0006

Office of Naval Research FOA-AFRL-AFOSR-2020-0001

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

<https://www.wpafb.af.mil/Welcome/Fact-Sheets/Display/Article/842111/afosr-funding-opportunities-university-research-initiative-uri/#anchor1>

<https://www.onr.navy.mil/en/Education-Outreach/Sponsored-Research/University-Research-Initiatives/DURIP>

Brief Description: The Department of Defense (DoD) announces the Fiscal Year 2021 Defense University Research Instrumentation Program (DURIP). DURIP is designed to improve the capabilities of accredited United States (U.S.) institutions of higher education to conduct research and to educate scientists and engineers in areas important to national defense, by providing funds for the acquisition of research equipment or instrumentation. For-profit organizations are not eligible for DURIP funding. Proposing institutions should be seeking to purchase instrumentation in support of research areas of interest to the DoD, including areas of research supported by the administering agencies.

Army Research Office at <http://www.aro.army.mil>

Select "Broad Agency Announcements" in the "For the Researcher" section to see the most recent ARL or ARO Core Broad Agency Announcement for Basic and Applied Scientific Research.

Office of Naval Research at <http://www.onr.navy.mil/>.

Select "Contracts and Grants" and then "Funding Opportunities" to see the Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology, BAA N00014-18-S-B001.

Air Force Office of Scientific Research at <http://www.wpafb.af.mil/afri/afosr/>

Awards: DURIP funds will be used for the acquisition of major equipment to augment current or develop new research capabilities in support of DoD-relevant research. Proposals may request \$50,000 to \$1,500,000. Proposals for purely instructional equipment are not eligible. General-purpose computing facilities are not appropriate for DURIP funding, but requests for computers for DoD-relevant research programs are appropriate.

Proposal Deadline: May 15, 2020

Contact Information:

Army Research Office

DR. LARRY RUSSELL, JR.

Phone: (919) 549-4211

E-mail: usarmy.rtp.rdecom-aro.mbx.durip@mail.mil

Office of Naval Research

DR. ELLEN LIVINGSTON

Phone: (703) 696-4668

E-mail: ellen.s.livingston@navy.mil

Air Force Office of Scientific Research

MS. KATIE WISECARVER

Phone: (703) 696-9544

E-mail: durip@us.af.mil

Grant Program: Quantum Information Sciences
Agency: Department of Defense FA8750-20-S-7006
Website:

https://beta.sam.gov/opp/dd6cccb1a9424440b7f0ff1d60ba9b7b/view?keywords=intelligence&sort=-modifiedDate&index=opp&is_active=true&page=1

Brief Description: The Air Force Research Laboratory - Information Directorate (AFRL/RI) is soliciting white papers under this Broad Agency Announcement (BAA) for research, design, development, concept testing, evaluation, experimentation, integration and delivery of Quantum Information Sciences supporting the implementation and use of Command, Control, Communications, Computers & Intelligence (C4I)-related information and communications technologies and techniques. In particular, this effort seeks to advance and assess advanced algorithm designs and technologies harnessing emerging quantum computing techniques to support AFRL/RI's C4I mission.

AFRL/RI has established a Quantum Information and Science branch (RITQ). Research within this branch will include Quantum Algorithms and Computing, Memory-Node-Based Quantum Networking, Quantum Information Processing, Superconducting Hybrid Quantum Platforms, and Quantum Information Sciences. These technologies will have both in-house and contractual based requirements to support the overall mission of the RITQ branch.

Further, AFRL/RI is interested in developing a user community around this emerging technology, to consist of other U.S. Government organizations (federal, state, and local), U.S. Government contractors and commercial industry, and academia (both public and private).

Awards: Various. Total funding for this BAA is approximately \$49.9M. Individual awards will not normally exceed 36 months with dollar amounts normally ranging from \$0.5M to \$2M.

Proposal Deadline: FY21 by 30 Sep 2020; FY22 by 30 Sep 2021

Contact Information: Kristi Mezzano

AFRL/RITQ

Telephone: (315) 330-2448

Email: AFRL.RIT.Quantum@us.af.mil

Grant Program: Synthetic Biology (SynBio) Manufacturing Innovation Institute (MII)
Agency: Department of Defense DEPT OF THE AIR FORCE AFMC FA8650-20-S-5028

Website: https://beta.sam.gov/opp/f87127393cb84157b8da1957ec686d16/view?keywords=FA8650-20-S-5028&sort=-relevance&index=&is_active=true&page=1

Brief Description: The purpose of this Notice of Intent is to announce the U.S. Government's intent to launch a competition for the ninth Manufacturing Innovation Institute (MII) led by the Department of Defense (DoD). The technical focus area for this Institute will be Synthetic Biology. Funding will be commensurate with the other DoD MIIs with similar expectations for cost-share from non-Federal sources of 1:1 or greater. DoD expects to release the formal solicitation in late February 2020. Proposer's Days will follow release of the formal solicitation around mid to late March 2020. The exact date and location will be confirmed in the solicitation release. Synthetic Biology (SynBio) promises to deliver a new class of manufacturing that will provide the United States with domestic capabilities to manufacture critical resources, providing supply chain security. SynBio manufacturing also has the potential to create entirely new classes of products with defense applications, such as chemicals and materials with advanced properties that could be used in austere environments. The combination of defense priorities addressable by SynBio manufacturing and the commercial potential of these innovations in food, agriculture, fuel, pharmaceuticals, and other consumer products, will create new opportunities for U.S. manufacturers.

Awards: TBD

Proposal Deadline: TBD

Contact Information: MARY A. SHARITS, Contracting Officer/Grants & Agreements Officer
AFRL/RXKMC; 2130 8th STREET; WRIGHT PATTERSON AFB, OH 45433-7541
MARY.SHARITS@US.AF.MIL Phone: (937) 713-9898

Grant Program: Department of Defense (DoD) – Science, Technology, Engineering, and Mathematics (STEM) Educational Outreach Programs

Agency: Department of Defense Army Contracting Command - New Jersey W15QKN-20-R-09H5

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

Brief Description: The U.S. Army Contracting Command - New Jersey (CCNJ), on behalf of the Army Combat Capabilities Development Command Armaments Center (CCDC AC) seeks to enter into a Grant for a Science, Technology, Engineering and Mathematics (STEM) Outreach Program. This Funding Opportunity Announcement (FOA) is considered a competitive combined synopsis/solicitation, therefore, this announcement constitutes the only synopsis or solicitation that will be released.

The objective of this FOA, which is being issued in accordance with 10 USC §2192, is to seek application packages from Applicants capable of engaging and improving Grades K-12 Plus (to include colleges, universities, and vocational schools) STEM skills through outreach programs and support services on a national level. The requirement for increased STEM professional development is necessary to meet the long term national defense needs of the United States for personnel proficient in such skills.

Awards: Various , Anticipated available funding: \$25,000,000

Proposal Deadline: March 10, 2020

Contact Information: Any questions related to this FOA must be directed to the Government point of contact identified below by 4:00pm Eastern time on 28 February 2020:

David Grimes, Grants Specialist, CCNJ-ET, david.m.grimes2.civ@mail.mil

Edward Gorsky, Grants Specialist, CCNJ-ET, Edward.a.gorsky.civ@mail.mil

Morgan Ziatyk, Grants Officer, CCNJ-ET, Morgan.f.ziatyk.civ@mail.mil

Grant Program: Hydrogen Fuel Cell-Battery Powered Hybrid Emergency Relief Truck: ‘H2Rescue’

Agency: Department of Defense Department of Army W81EWF20FOA0001

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

Brief Description: This is a joint federal Funding Opportunity Announcement (FOA) for one cooperative agreement award, to be issued by the US Army Corps of Engineers (USACE), Engineer Research and Development Center Construction Engineering Research Laboratory (ERDC-CERL). The effort is supported by the U.S. Department of Energy (DOE) Fuel Cell Technologies Office, the DOE Vehicle Technologies Office, the U.S. Army Futures Command Ground Vehicle Systems Center (GVSC), and the Department of Homeland Security (DHS). Each of these agencies support missions relevant to this announcement, including hydrogen fuel cell-battery powered hybrid vehicle development, emergency response and military operations. The development and deployment of a fuel cell-battery powered hybrid emergency relief truck could ultimately enhance their response capabilities. Expected benefits include clean, quiet operation, load-following microgrid- capable exportable power, water production, and heat. Under this FOA ERDC- CERL is accepting applicants to build, test, and demonstrate a fuel cell-battery powered hybrid emergency relief truck. This FOA is an example of collaboration and coordination among federal agencies, per EPACT 2005, Title VIII on hydrogen.

Awards: Various

Proposal Deadline: March 31, 2020

Contact Information: Rhoda Lewis, Grants Specialist, Contracting Division, Tel: 217-373-4479,
Email: Rhoda.A.Lewis@usace.army.mil

Grant Program: Fiscal Year (FY) 2021 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) Manufacturing Science Program

Agency: Department of Defense Office of Naval Research N00014-20-S-F002

Website: <https://www.onr.navy.mil/work-with-us>

Brief Description: While the scientific foundations behind most present-day manufacturing technologies have long been established, potential advances in current technologies as well as the development of new manufacturing techniques often require a new scientific knowledge base to provide the foundation for those processes to develop into viable and reliable manufacturing technologies. The Manufacturing Science program addresses the need for fundamental research programs to support these new and novel manufacturing technologies for the Navy. Recent advances in computational modeling capabilities have facilitated the intelligent design of new manufacturing capabilities, the models to predict their performance, and the experimental strategies to best achieve them. These new predictive models can provide powerful benefits for the development of new manufacturing technologies and the capabilities that can be achieved. Program Objectives: The objective of the Manufacturing Science program is to support fundamental scientific research that will help facilitate or enable the advancement/development of manufacturing technologies for Naval components. Research proposals are encouraged to include a modeling component to help direct the research. The focus of the Manufacturing Science program is on Naval manufacturing, preference will be given to Naval-unique or Naval-centric topics.

Awards: Under this Manufacturing Science Program FOA competition, ONR intends to award up to an estimated total value of \$650,000.00 subject to the availability of funds. Each individual award will be up to a maximum of \$100,000 per year, for a period of one (1), two (2) or three (3) years.

Proposal Deadline: White papers are a MANDATORY component of a two-part submission process.

White Papers Submission: 06 March 2020

Full Proposal: 08 June 2020

Contact Information: Dr. Richard W. Fonda, Manufacturing Science Program Manager, Office of Naval Research, Email: richard.fonda@navy.mil

Grant Program: NRL Long Range Broad Agency Announcement (BAA) for Basic and Applied Research

Agency: Department of Defense Naval Research Laboratory N00173-19-S-BA01

Website: <https://www.nrl.navy.mil/doing-business/Current-NRL-BAA>

Brief Description: The Naval Research Laboratory (NRL) The Naval Research Laboratory (NRL) is the Navy's corporate laboratory. NRL conducts basic and applied research for the Navy in a variety of scientific and technical disciplines. The basic research program is driven by perceptions about future requirements of the Navy. NRL conducts most of its research program at its own facilities but also funds some related research such as anticipated by this announcement. More extensive research support opportunities are available from the Naval Research Laboratory (NRL). NRL announcements may be accessed via the Internet at <https://www.nrl.navy.mil/doingbusiness/contracting-division/baa>.

NRL is interested in receiving proposals for Long-Range Science and Technology (S&T) Projects which offer potential for advancement and improvement of Navy and Marine Corps operations. Readers should note that this is an announcement to declare NRL's broad role in competitive funding of

meritorious research across a spectrum of science and engineering disciplines. A brief description of the NRL Program Codes and the science and technology thrusts that NRL is pursuing is provided below. Additional information can be found at the NRL website at <https://www.nrl.navy.mil/research/directorates-divisions/>.

Awards: Various

Proposal Deadline: September 05, 2020

Contact Information: Mary A Johnson; Procurement Analyst; Phone 202-767-2021

[General Inquiries](#)

Grant Program: Air Superiority Technology Broad Agency Announcement

Agency: Department of Defense FA8651-20-S-0008

Website:

<https://www.fbo.gov/index?s=opportunity&mode=form&id=dbdb4a35cb22a4a0d8414b652f0c74bb&tab=core&cvview=0>

Brief Description: For purposes of this announcement, research is defined to be scientific study and experimentation directed at increasing knowledge and understanding in relation to long term national security needs. It is an enhancement to related exploratory and advanced development programs. A program should be designed to demonstrate well-defined and substantive research results, should not be overly ambitious or open-ended, and should not be a paper study that inherently requires a substantial testing effort.

RESEARCH AREA 1 – MODELING, SIMULATION, & ANALYSIS (MS&A): The objective of this work is to develop/modify and employ models used to analyze Air Superiority concepts and their related concepts of employment. The objective is to apply, modify and/or combine engineering, engagement (one-on-one), mission (few-on-few), systems-of-systems, campaign (many-on-many, military worth), level modeling techniques, tools, and analysis methods as well as virtual and constructive digital simulation which lend themselves to the quick and effective evaluation of air superiority concepts. Concepts include, but are not limited to, intercommunicative weapons, novel damage mechanisms, lethal and novel destruct mechanisms, multiple targeting, and time critical delivery. Detailed modeling includes, but is not limited to, sensors, aerodynamics, autopilots, navigation and guidance schemes, propulsion, warheads, fuzes, datalinks, fire control, launcher, suspension, carriage and release, error filters, environment (wind, fog, and dust), lethality, vulnerability, and threats.

RESEARCH AREA 2 – INNOVATIVE AIRCRAFT INTEGRATION TECHNOLOGIES The objective of this work is to design, develop, and demonstrate innovative aircraft integration technologies including but not limited to physical, electrical, and logical interfaces; and other aspects of aircraft integration that may be applicable.

RESEARCH AREA 3 –FIND-FIX-TARGET-TRACK (F2T2) & DATALINK TECHNOLOGIES The objective of this work is to design, develop, and demonstrate innovative Find, Fix, Target, and Track (F2T2) technologies for the detection of threats to aircraft. These F2T2 technologies should provide threat warning, threat characteristics, You Are The One (YATO) or You Are Not The One (YANTO) discrimination, highly accurate threat cueing, range and range rate, and other pertinent information required to analyze and coordinate a response to a threat.

RESEARCH AREA 4 – ENGAGEMENT MANAGEMENT SYSTEM TECHNOLOGIES The objective of this work is to design, develop, and demonstrate an innovative Engagement Management system to maximize aircraft survivability in increasingly contested environments while minimizing false positives and engagement costs. These technologies should interface with aircraft and other Find-Fix-Target-Track (F2T2) systems, determine the optimum counter measure response(s), respect keep-out or no-fire zones, and make other decisions required for aircraft survivability.

RESEARCH AREA 5 – HIGH VELOCITY FUZING The objective of this work is to design, develop, and demonstrate high velocity fuzing, including both Electronic Safe and Arm (ESAF) technologies that can safely initiate a warhead and Target Detection Devices (TDDs) that can provide miniaturized, fast-responding, highly accurate range and location information for high closure velocity intercepts.

RESEARCH AREA 6 – MISSILE ELECTRONICS The objective of this work is to investigate all aspects of Missile Power & Electronics as it applies to air-to-air missiles. The following technologies and research areas are of particular interest: Power Conversion and Distribution, Power Generation and Storage Technologies (Advanced Missile Battery Technology and Ultracapacitors), Guidance Electronics, and Thermal Management.

RESEARCH AREA 7 – MISSILE GUIDANCE AND CONTROL TECHNOLOGIES The objective of this work is to investigate Missile Guidance and Control Technologies to include the following: Robust guidance algorithms against maneuvering targets, real time optimal lofting/energy management techniques, integrated guidance and control, reduced latency between seeker measurements and final control fin commands, highly accurate seeker technologies and algorithms, robust and novel target state estimators, third party queuing, optimal body orientation at endgame encounter, (reinforcement learning-adaptive control) approach, simultaneous learning and control, Hybrid (switched) guidance law selection based on the red-target strategy/maneuver, many-on-many engagement guidance laws, optimal pulse delay and propellant allocation, rapid flexible autopilot design process, robust control in aerodynamic cross coupling environments for various airframe designs from canard to tail control, robust control at high angles of attack, innovative autopilot architectures, efficient verification of safe separation over all flight regimes, Non-linear/adaptive control for agile maneuver, and advanced airframe control techniques.

RESEARCH AREA 8 – ADVANCED WARHEAD TECHNOLOGIES

More areas; Please see the BAA on above website.

Awards: Various

Proposal Deadline: This BAA will remain open through 31 October 2024 or until amended or superseded. It may be reissued and/or amended periodically, as needed. This BAA is set up in two parts: (1) Basic Open BAA, in which white papers may be submitted at any time during the open period, and (2) CALL BAA, in which proposal CALL announcements may be issued by the Government in FedBizOpps or Grants.gov under FA8651-20-S-0008. This BAA is intended to cover Applied Research, Advanced Technology Development and Advanced Component Development & Prototypes.

Contact Information: Technical POC: Mr. David Hartline , AFRL, (850) 882-1324

david.hartline.1@us.af.mil

Grant Program: DSO Office-wide Broad Agency Announcement

Agency: Department of Defense DARPA HR001119S0071

Website: <https://www.darpa.mil/work-with-us/opportunities?tFilter=&oFilter=2&sort=date>
https://www.fbo.gov/index?s=opportunity&mode=form&id=22a346a8b55f0a7040d57a8fbc19e644&tab=core&_cview=1

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 that address one or more of the following technical domains: (1) Frontiers in Math, Computation and Design, (2) Limits of Sensing and Sensors, (3) Complex Social Systems, and (4) Anticipating Surprise. Each of these domains 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: The total award value for the combined Phase 1 base and Phase 2 option is limited to \$1,000,000. This total award value includes Government funding and performer cost share (if required).

Proposal Deadline: Executive Summary Due Date: June 12, 2020, 4:00 p.m. o Abstract Due Date: June 12, 2020, 4:00 p.m. o Full Proposal Due Date: June 12, 2020, 4:00 p.m.

Contact Information: BAA Email: HR001119S0071@darpa.mil

Department of Transportation

Grant Program: Dwight David Eisenhower Transportation Fellowship Program (DDETFP)

Grants or Research Fellowship (GRF)

Agency: Department of Transportation 693JJ318NF5227-2020

Website:

https://www.fhwa.dot.gov/innovativeprograms/centers/workforce_dev/post_secondary_education.aspx

Brief Description: The DDETFP Graduate Fellowship provides funding for students to pursue master's or doctoral degrees in transportation-related disciplines. The goals of these Grants are to 1) attract the Nation's brightest minds to the field of transportation, 2) enhance the careers of transportation professionals by encouraging them to seek advanced degrees, and 3) bring and retain top talent in the transportation industry of the U.S.

[Please join us for an informational webinar on February 19, 2020 at 3pm \(Eastern\)](#)

Awards: Estimated Total Program Funding: \$1,000,000

Proposal Deadline: March 6, 2020 at 4:00pm Eastern Time.

Contact Information: Ewa Flom Program Manager Phone 703-235-0532 ewa.flom@dot.gov

Department of Agriculture:

Grant Program: Scientific and Cooperative Research Program

Agency: Department of Agriculture USDA-FAS-10961-0700-10-20-0001

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

Brief Description: The United States Department of Agriculture's (USDA) Foreign Agricultural Service (FAS) announces the availability of funding through cost reimbursable agreements for the Scientific Cooperation Research Program (SCRCP) for fiscal year (FY) 2020.

SCRCP will support applied research, extension, and education projects — lasting up to two years between U.S. researchers and researchers from selected emerging market economies - that create practical solutions to challenges faced by small farmers and build regional or global trade capacities in FAS countries. In general, applications should support one or more of the following strategies of the Global Food Security Act (Public Law No: 114-195):

1. Accelerate inclusive, agricultural-led economic growth that reduces global poverty, hunger, and malnutrition, particularly among women and children.
2. Increase the productivity, incomes, and livelihoods of small-scale producers, especially women, by working across agricultural value chains, enhancing local capacity to manage agricultural resources effectively, and expanding producer access to local and international markets.
3. Build resilience to food shocks among vulnerable populations and households while reducing reliance upon emergency food assistance.

4. Create an enabling environment for agricultural growth and investment, including through the promotion of secure and transparent property rights.
5. Improve the nutritional status of women and children, with a focus on reducing child stunting, including through the promotion of highly nutritious foods, diet diversification, and nutritional behaviors that improve maternal and child health;
6. Align with and leverage broader United States strategies and investments in trade, economic growth, science and technology, agricultural research and extension, maternal and child health, nutrition, and water, sanitation, and hygiene.

Awards: \$500,000 total (up to \$50,000 per award)

Proposal Deadline: Application Submission Deadline: March 2, 2020

Contact Information: Sintayehu Assefa Phone: +1-202-720-2200 Email: SINTAYEHU.ASSEFA@USDA.GOV

Grant Program: Biotechnology Risk Assessment Grants Program

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

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

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

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

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

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

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

Agency: Department of Agriculture USDA-NIFA-AFRI-007052

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.

Awards: Anticipated Funding: \$192,600,000

Submission Deadline: Agricultural Innovation through Gene Editing - Letter of Intent required
Letter of Intent Deadline - February 19, 2020

Agricultural Microbiomes - Letter of Intent required

Letter of Intent Deadline - March 10, 2020

Tactical Sciences for Agricultural Biosecurity - Letter of Intent required

Letter of Intent Deadline - March 10, 2020

All Conference Grants - Letter of Intent required

Letter of Intent Deadline - Minimum of 135 days before the conference begins

Application Deadline Dates

Dates vary by program area priority, see Program Area Descriptions for additional information (See Part I, C.).

Contact: Technical Contact: Dr. Louis Tupas, Deputy Director, Institute of Bioenergy, Climate, and Environment Telephone: (202) 401-5022 Fax: (202) 401-6488 E-mail: AFRI@nifa.usda.gov

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. All projects must be located in a rural area and must be owned by the applicant.

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

Department of Labor

Grant Program: Apprenticeships: Closing the Skills Gap

Agency: Department of Labor FOA-ETA-19-09

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

Brief Description: Building on the experience abroad and in the United States, apprenticeships have emerged as a proven skills instruction model to meet industry's demand for a skilled American workforce. As the 21st economy requires greater skills development with an estimated 65 percent jobs of all jobs requiring some post-secondary education by 2020,¹ apprenticeship programs can bolster the employability and technical skills of workers while meeting the workforce needs of business and industry.

There are more than 7.1 million job openings right now in the United States,³ many of which require a skilled workforce. These include in-demand cybersecurity professions and emerging occupations involving artificial intelligence (AI) across several industry sectors. Expanding apprenticeships can help individuals gain the skills necessary to fill these vacancies and help employers find skilled workers more readily. The period of performance is 48 months with an anticipated start date of February 1, 2020.

The purpose of this grant program is to promote apprenticeships as a significant workforce solution in filling current job vacancies and closing the skills gap between employer workforce needs and the skills of the current workforce. The overarching goals of this grant program are threefold: (1) to accelerate the expansion of apprenticeships to industry sectors and occupations that have not traditionally deployed apprenticeships for building a skilled workforce, such as cybersecurity, artificial intelligence, and health care; (2) to promote the large-scale expansion of apprenticeships across the nation to a range of employers, including small and medium-sized employers; and (3) to increase apprenticeship opportunities for all Americans. Recognizing that apprenticeship is a training strategy that operates on both the supply side and the demand side of the labor market, this grant program aims to increase both the number of apprenticeship positions and the ability of all Americans to gain access to this proven pathway to family-sustaining careers.

Awards: We will award up to \$100 million in H-1B funds initially to fund approximately 16 to 30 apprenticeship grants, with awards ranging from \$500,000 to \$6 million.

Anticipated Funding: \$100,000,000

Proposal Deadline: September 24, 2019 no later than 4:00:00 p.m. Eastern Time. Passed: FYI

Contact Information: Denise Roach Grants Management Specialist roach.denise@dol.gov

EPA

Grant Program: Community-Scale Air Toxics Ambient Monitoring

Agency: Environmental Protection Agency EPA-OAR-OAQPS-20-05

Website: <https://www.epa.gov/grants/community-scale-air-toxics-ambient-monitoring>

Brief Description: EPA's Office of Air and Radiation (OAR) is soliciting applications from eligible entities for projects designed to assist state, local, and tribal air agencies in identifying and characterizing air toxics, also known as hazardous air pollutants (HAPs), through work that falls into one of four categories. Those categories are: 1) characterizing the impacts of air toxics in a community (community-scale monitoring); 2) assessing impacts of toxics emissions from specific sources (near-source monitoring); 3) evaluating new and emerging testing methods for air toxics; and, 4) analyzing existing air toxics data and developing or enhancing analytical, modeling, and/or implementation tools. Air toxics of particular interest to EPA in this solicitation include ethylene oxide, chloroprene, benzene, 1,3-butadiene, and metals such as hexavalent chromium, nickel, and arsenic. The total estimated funding for this competitive opportunity is approximately \$5,000,000. EPA anticipates awarding approximately 10 to 20 assistance agreements from this announcement, subject to the availability of funds, the quality of applications received, and other applicable considerations.

EPA will hold two information sessions on the 2020 competition February 19 and 20, 2020. Information about the sessions is available on the [Community-Scale Air Toxics Ambient Monitoring](#) website.

Award: Up to \$750,000 per award; Anticipated available funding: \$5,000,000

Submission Deadline: March 30, 2020

Contact: Nealson Watkins, watkins.nealson@epa.gov

Grant Program: FY2020 National Environmental Information Exchange Network Grant Program

Agency: Environmental Protection Agency EPA-OMS-20-01

Website: <https://www.epa.gov/exchangenetwork/fy-2020-exchange-network-grant-solicitation-notice>

Brief Description: The EPA Exchange Network Grant Program is soliciting project applications using the Environmental Information Exchange Network (EN) to:

- Facilitate sharing of environmental data, especially through shared and reusable services.
- Streamline data collection and exchanges to improve its timeliness for decision making.
- Increase the quality and access to environmental data through discovery, publishing, outbound and analytical services so it is more useful to environmental managers.
- Develop foundational EN shared services to reduce burden and avoid costs for co-regulators and the regulated community.
- Expand and improve participation in the EN by strengthening the requisite information management and technology capabilities for interested parties to fully participate in the EN.

Award: In FY 2020, EPA expects to award about \$8,000,000 for 20-30 assistance agreements of up to \$400,000 each.

Submission Deadline: March 25, 2020

Contact: Erika Beasley, Office of Information Management, Phone: (202) 566-2530
beasley.erika@epa.gov

Grant Program: FY 2020 – FY 2021 Pollution Prevention Grant Program

Agency: Environmental Protection Agency

Website: https://www.epa.gov/sites/production/files/2020-01/documents/bfy_20-21_p2_grant_rfa_final.pdf

Brief Description: EPA is announcing a grant competition to fund two-year Pollution Prevention assistance agreements for projects that provide technical assistance (e.g., information, training, tools) to businesses and their facilities to help them develop and adopt source reduction practices (also known as “pollution prevention” or “P2”). P2 means reducing or eliminating pollutants from entering any waste stream or otherwise being released into the environment prior to recycling, treatment, or disposal. In keeping with the Pollution Prevention Act of 1990, EPA is encouraging P2 because implementing these practices can result in reductions in toxic pollutants, the use of water, energy and other raw materials, while also lowering business costs. States, state entities, federally-recognized tribes and intertribal consortia are eligible to apply.

Award: It is anticipated that EPA may award a total of approximately \$9.38 million in federal P2 grant funding over a two-year funding period (\$4.69 million in FY 2020 funds and approximately \$4.69 million in FY 2021 funds based on anticipated FY 2021 funding which is not guaranteed and may change). Individual grant awards may potentially be in the range of \$40,000- \$500,000 for the two-year funding period (between \$20,000 - \$250,000 incrementally funded per year).

Submission Deadline: March 31, 2020

Contact: Michele Amhaz, 202-564-8857 amhaz.michele@epa.gov

Department of Energy

Grant Program: Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0002206 Connected Communities

Agency: Department of Energy DE-FOA-0002249

Website: <https://eere-exchange.energy.gov/#FoaIdc01275fc-af09-43e7-a96b-86ccb83cb88a>

Brief Description: The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Building Technologies Office (BTO), a Funding Opportunity Announcement (FOA) entitled “Connected Communities.” The goal of this planned FOA would be to demonstrate the ability of efficient buildings to interact with the grid to provide demand flexibility. This includes the ability to shift and modulate load in both existing and new communities across diverse climates, geography, building types

and grid/regulatory structures, while maintaining (if not enhancing) occupant satisfaction and productivity. This builds on BTO's current Grid-Interactive Efficient Buildings (GEB) work. Improving the energy efficiency and demand flexibility of buildings alleviates pressure on the electric grid and extends our energy resources.

Awards: Various; Estimated Total Program Funding: \$42,000,000

Letter of Intent: N/A

Proposal Submission Deadline: N/A

Contact: Erika S. Gupta erika.gupta@ee.doe.gov

Grant Program: Solar Energy Technologies Office Fiscal Year 2020 Funding Program

Agency: Department of Energy DE-FOA-0002243

Website: <https://eere-exchange.energy.gov/Default.aspx#FoaIdc8e280d2-b7bf-4138-810b-cad9ba1541ac>

Brief Description: This funding opportunity announcement (FOA) is being issued by the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO). SETO supports solar energy research and development (R&D) in three technology areas—photovoltaics (PV), concentrating solar-thermal power (CSP), and systems integration—with the goal of improving the affordability, reliability, and performance of solar technologies on the grid. This section describes the overall goals of the Solar Energy Technologies Office Fiscal Year 2020 (SETO 2020) funding program and the types of projects being solicited for funding support through this FOA. The SETO 2020 funding program seeks to advance R&D of solar technologies that reduce the cost of solar, increase the competitiveness of American manufacturing and businesses, and improve the reliability of the grid. These projects will advance R&D in PV, CSP, and energy management technologies, while also working to improve cybersecurity, expand solar to new applications like agricultural solar, integrate solar and storage, and utilize artificial intelligence to address research challenges.

Informational webinars: February 12, 2020, at 2 PM Eastern Standard Time

<https://doe.webex.com/doe/onstage/g.php?MTID=e61dc56501622ba9e5a4429e90e70794d>

Awards: Various; Estimated Total Program Funding: \$125,500,000

Letter of Intent: Required by 3/9/2020 5:00 PM ET

Proposal Submission Deadline:

- Concept Paper Submission Deadline: 3/16/2020 5:00 PM ET
- Full Application Submission Deadline: 5/21/2020 5:00 PM ET

Contact: seto.foa@ee.doe.gov For questions regarding this FOA

Grant Program: Request for Information: Prediction of Solar Variability for Better Grid Integration

Agency: Department of Energy DE-FOA-0002284

Website: <https://eere-exchange.energy.gov/#FoaIdde08c049-b05f-4671-81b9-b7bb7e010b36>

Brief Description: The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) is issuing this request for information (RFI) to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders. This RFI will inform SETO's strategic planning on research related to the integration of solar energy resources. Specifically, this RFI will inform SETO's strategies relating to prediction of solar irradiance reaching the surface of the earth, and power output from solar generation plants, using either photovoltaic (PV) or concentrating solar power (CSP) technologies. Improving solar generation prediction will better inform grid operators as they consider the

impacts of solar power variability on grid planning and operations technologies, as well as the owners and operators of utility-scale plants and aggregators of distributed PV systems.

Awards: TBD

Proposal Submission Deadline: To respond, please email your response to SETO.RFI.SI@ee.doe.gov no later than 12:00pm (ET) on February 29, 2020.

Contact: Elizabeth Parrish SETO.RFI.SI@ee.doe.gov

Grant Program: FY2020 Research Opportunities in Accelerator Stewardship

Agency: Department of Energy DE-FOA-0002262

Website: <https://www.grants.gov/web/grants/search-grants.html?keywords=DE-FOA-0002262>

Brief Description: The Accelerator Stewardship program's mission is to support fundamental accelerator science and technology development of relevance to many fields beyond HEP and to disseminate accelerator knowledge and training to the broad community of accelerator users and providers. Further information about the Accelerator Stewardship program may be found at <https://science.osti.gov/hep/research/accelerator-stewardship/>. This FOA focuses on three distinct activities: (1) applied research that is focused on developing a prototype in response to a specific technical challenge, (2) basic research that broadly impacts many accelerator applications, and (3) facilitating access to accelerator R&D capabilities at SC-sponsored National Laboratories for academic research.

Awards: Standard grants; Available funding: \$5,000,000

Letter of Intent: Not Required

Submission Deadline for Pre-Application: February 21, 2020, at 5 PM Eastern Time

Submission Deadline for Applications: April 3, 2020, at 5 PM Eastern Time

Contact: Dr. Eric R. Colby 301-903-5475 Eric.Colby@science.doe.gov

Grant Program: Advanced Vehicle Technologies Research Funding Opportunity Announcement

Agency: Department of Energy DE-FOA-0002197

Website: <https://eere-exchange.energy.gov/#FoaId0479e8d2-3ad8-4964-ab4b-b665b77029d5>

Brief Description: The Office of Energy Efficiency and Renewable Energy (EERE) is issuing, on behalf of the Vehicle Technologies Office (VTO), a Funding Opportunity Announcement (FOA) entitled, "Fiscal Year 2020 Advanced Vehicle Technologies Research Funding Opportunity Announcement."

This FOA seeks research projects to address priorities in the following areas: advanced batteries and electrification in support of the recently-announced DOE Energy Storage Grand Challenge; advanced engine and fuel technologies, including technologies for off-road applications and alternative fueled engines; lightweight materials; new mobility technologies (energy efficient mobility systems); and alternative fuels technology demonstrations.

Awards: Estimated Total Program Funding: \$133,200,000

Proposal Submission Deadline: Concept Paper Submission Deadline: 2/21/2020 5:00 PM ET

- Full Application Submission Deadline: 4/14/2020 5:00 PM ET

Contact: DE-FOA-0002197@netl.doe.gov For questions related to this specific Funding Opportunity Announcement

Grant Program: FY20 Bioenergy Technologies Multi-Topic FOA

Agency: Department of Energy DE-FOA-0002203

Website: <https://eere-exchange.energy.gov/#FoaId23bcb339-aa53-4821-9421-d109747cb168>

Brief Description: This FOA will provide funding to address BETO's highest priority R&D areas. It includes Topic Areas from five BETO programs: Feedstock Supply and Logistics; Advanced Algal Systems; Conversion Technologies; Advanced Development and Optimization; and Strategic Analysis and Crosscutting Sustainability. Each Topic Area supports BETO's objectives to reduce the minimum selling price of drop-in biofuels, lower the cost of biopower, and enable high-value products from biomass or waste resources.

Under this funding opportunity, BETO is interested in the following topic areas:

Topic 1: Scale Up of Bench Applications (SCUBA)

Topic 2: Waste to Energy Strategies for the Bioeconomy

Topic 3: Algae Bioproducts and CO₂ Direct-Air-Capture Efficiency (ABCDE)

Topic 4: Bio-Restore: Biomass to Restore Natural Resources

Topic 5: Efficient Wood Heaters

Topic 6: Biopower and Products from Urban and Suburban Wastes: North American Multi-University Partnership for Research and Education

Topic 7: Scalable CO₂ Electrocatalysis

The eXCHANGE system is currently designed to enforce hard deadlines for Concept Paper and Full Application submissions. The APPLY and SUBMIT buttons automatically disable at the defined submission deadlines. The intention of this design is to consistently enforce a standard deadline for all applicants.

Awards: DOE anticipates that the total value of awards over a five-year project period made under this FOA will be between \$100 million and \$625 million, subject to the availability of future year appropriations.

Proposal Submission Deadline: Concept Paper Submission Deadline: 3/5/2020 5:00 PM ET

- Full Application Submission Deadline: 4/30/2020 5:00 PM ET

Contact: eXCHANGE helpdesk for assistance (exchangehelp@hq.doe.gov).

NASA

Grant Program: ROSES 2020: Heliophysics Supporting Research

Agency: NASA NNH20ZDA001N-HSR

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BBA3F017B-32B1-74F1-3DC5-0DC78AA76DB9%7D&path=&method=init>

Brief Description: Heliophysics Supporting Research (SR) awards are research investigations of significant magnitude that employ a combination of scientific techniques. These must include an element of (a) theory, numerical simulation, or modeling, and an element of (b) data analysis and interpretation of NASA-spacecraft observations. HSR is a component of the Heliophysics Research Program and proposers interested in this program element are encouraged to see B.1, The Heliophysics Research Program Overview for Heliophysics-specific requirements. Common requirements for all ROSES elements and proposals are found in the ROSES Summary of Solicitation and the Proposer's Guidebook and the order of precedence for proposers.

Awards: Various; Available funding: \$6,500,000

Notices of Intent Due: N/A

Proposal Deadline: November 18, 2020

Contact: Patrick Koehn; Email: patrick.koehn@nasa.gov

Grant Program: ROSES 2020: Astrophysics Data Analysis**Agency:** NASA NNH20ZDA001N-ADAP**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BEC4AFCE9-78E3-7164-00DC-5D3E325B4EA1%7D&path=&method=init>

Brief Description: Over the years, NASA has invested heavily in the development and execution of an extensive array of space astrophysics missions. The magnitude and scope of the archival data from those missions enables science that transcends traditional wavelength regimes and allows researchers to answer questions that would be difficult, if not impossible, to address through an individual observing program. To capitalize on this invaluable asset and enhance the scientific return on NASA mission investments, this Astrophysics Data Analysis Program (ADAP) program in ROSES provides support for investigations whose focus is on the analysis of archival data from NASA space astrophysics missions.

Awards: Various; Available funding: \$7,000,000**Notices of Intent Due:** N/S**Proposal Deadline:** March 19, 2020**Contact:** Douglas M. Hudgins; Email: Douglas.M.Hudgins@nasa.gov**Grant Program: HELIOPHYSICS - Early Career Investigator Program****Agency:** NASA NNH20ZDA001N-ECIP**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BBC6756FD-561A-B7A1-F68A-2A18E6851701%7D&path=&method=init>

Brief Description: The Early Career Investigator Program (ECIP) in Heliophysics is designed to support outstanding scientific research and career development of scientists at the early stage of their professional careers. The program aims to encourage innovative research initiatives and cultivate diverse scientific leadership in Heliophysics. This program is designed to foster the empowerment, inspiration, and education of the next generation of space researchers, as part of the E of the DRIVE (Diversify, Realize, Integrate, Venture, Educate) initiative put forward as a high priority recommendation of the 2013 Solar and Space Physics Decadal Survey.

Awards: Various, Available funding: \$1,500,000**Notices of Intent Due:** N/A**Proposal Deadline:** August 12, 2020**Contact:** Katya Verner, Telephone: 202-358-1213 Email: Ekaterina.M.Verner@nasa.gov**Grant Program: ROSES 2020: Astrophysics Research and Analysis****Agency:** NASA NNH20ZDA001N-APRA**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BD4C56B9D-7FF4-D128-D82D-6BB8F4306D00%7D&path=&method=init>

Brief Description: The Astrophysics Research and Analysis Program (APRA) program solicits basic research proposals for investigations that are relevant to NASA's programs in astronomy and astrophysics and includes research over the entire range of photons, gravitational waves, and particle astrophysics. Awards may be for up to four years' duration (up to five years for suborbital investigations), but shorter-term proposals are typical; four-year or five-year proposals must be well justified. Proposals for suborbital investigations are particularly encouraged. APRA investigations may advance technologies anywhere along the full line of readiness levels, from Technology Readiness Level (TRL) 1 through TRL 9. The emphasis of this program element is on technologies and investigations that advance NASA astrophysics missions and goals.

Awards: Various

Notices of Intent Due: N/A

Proposal Deadline: December 17, 2020

Contact: Dominic J. Benford Astrophysics Division, Telephone: (202) 358-1261 Email: Dominic.Benford@nasa.gov

Grant Program: Early Career Faculty

Agency: NASA 80HQTR20NOA01-20ECF-B1

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BACAD5344-C2D1-8304-D57E-2FE90D346946%7D&path=&method=init>

Brief Description: The STRG Program within STMD is fostering the development of innovative, low-TRL technologies for advanced space systems and space technology. The goal of this lowTRL endeavor is to accelerate the development of groundbreaking, high-risk/high-payoff space technologies, not necessarily directed at a specific mission, to support the future space science and exploration needs of NASA, other government agencies, and the commercial space sector. Such efforts complement the other NASA Mission Directorates' focused technology activities which typically begin at TRL 3 or higher. The starting TRL of the efforts to be funded as a result of this Appendix will be TRL 1 or TRL 2; typical end TRLs will be TRL 2 or TRL 3. See Attachment 2 of the NRA for TRL descriptions.

This Appendix seeks proposals to develop unique, disruptive, or transformational space technologies that have the potential to lead to dramatic improvements at the system level — performance, weight, cost, reliability, operational simplicity, or other figures of merit associated with space flight hardware or missions. Although progress under an award may be incremental, the projected impact at the system level must be substantial and clearly defined.

Awards: \$200K/per year for maximum 3 years

Notices of Intent Due: February 26, 2020

Proposal Deadline: March 25, 2020

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

Grant Program: ROSES 2019: Sustainable Land Imaging-Technology

Agency: NASA NNH19ZDA001N-SLIT

Website: <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B628D67E6-7DF9-6DE8-B052-940659BC37F4%7D&path=&method=init>

Brief Description: The aim of the Sustainable Land Imaging-Technology (SLI-T) program is to develop next-generation technology for a long-term programmatically sustainable system that as a minimum continues the historical measurement capability, and potentially improves this capability. Technology developed under this program will be considered for infusion over the lifetime of the program as a potential contributing element of the long-term sustainable program.

Awards: Various; Available funding: \$1,250,000

Proposal Deadline: April 07, 2020; Pre-proposal deadline may be earlier. Please check with program officer.

Contact: Prospective proposers are requested to submit any questions in writing to sachidananda.r.babu@nasa.gov no later than 30 days before the proposal due date.

National Endowment of Humanities

Grant Program: Fellowships**Agency: National Endowment for the Humanities 20200408-FEL****Website:** <https://www.neh.gov/grants/research/fellowships>**Brief Description:** NEH Fellowships are competitive awards granted to individual scholars pursuing projects that embody exceptional research, rigorous analysis, and clear writing. Applications must clearly articulate a project's value to humanities scholars, general audiences, or both.

Fellowships provide recipients time to conduct research or to produce books, monographs, peer-reviewed articles, e-books, digital materials, translations with annotations or a critical apparatus, or critical editions resulting from previous research. Projects may be at any stage of development.

NEH invites research applications from scholars in all disciplines, and it encourages submissions from independent scholars and junior scholars.

Awards: Maximum award amount: \$60,000**Deadlines:** April 8, 2020**Contact:** Contact the Division of Research Programs Team 202-606-8200 fellowships@neh.gov

Arnold and Mabel Beckman Foundation**Grant Program: Beckman Scholar Program****Agency: Arnold and Mabel Beckman Foundation****Website:** https://beckman-foundation.smapply.io/prog/beckman_scholars_program/**Brief Description:** The purpose of the Beckman Scholars Program is to help stimulate, encourage and support research activities by exceptionally talented, full-time undergraduate students who are pursuing their studies at accredited four-year colleges and universities located in the United States of America. These research activities shall be centered in either chemistry, biochemistry, the biological and medical sciences or some interdisciplinary combination of these subjects. Candidates for the Beckman Scholars Award must be full-time students throughout the duration of the award.

The research activities performed by Beckman Scholars shall be conducted under the guidance of a full-time, approved faculty member at the college or university receiving an award. Research activities must be performed part-time (ten hours per week) during one academic year, and full-time over two summers (ten 40-hour weeks each summer) immediately before and after the academic year research experience.

Awards: Each Institutional Award spans a three-year period, with 1-3 student/mentor teams selected by the institution each year depending on its Carnegie Classification. The amount of funding for the Beckman Scholars Program is \$26,000; \$21,000 specifically for the Scholar and \$5,000 for the Scholar's Mentor. The Program's financial support, in conjunction with the Annual Beckman Symposium, offers an academically stimulating and unique educational experience.**Deadlines:** June 15, 2020**Contact:** Please contact Richard Rosenberg at rnr@njit.edu if you are interested in submitting a proposal.

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 <http://www.njit.edu/research/streamlyne/>

Proposal Submission and Streamlyne Information

Internal Timeline for Successful and Timely Proposal Submission

The NJIT Proposal Submission Guidelines and Policy posted on the website <https://research.njit.edu/research-policies> provides the institutional timeline in order to help faculty and staff Principal Investigators for successful proposal submission. We are requesting all Principal Investigators, faculty, staff and administration to follow the proposal submission to help everyone to submit a successful proposal on time, preferably before the deadline as requested by federal funding agencies. The following are the NJIT Proposal Submission Guidelines modified for Streamlyne proposal submission system:

- **1 month (or earlier) before the due date:** initiate the proposal submission process in Streamlyne with a notice of intent to apply to college POC and SRA including the request for proposal identification number (NSF, NIH) and/or the RFP document. This is an important step that will help the College POC and SRA to manage your proposals. It will allow:
 - preliminary review of needs and sponsor requirements (meeting recommended)
 - set up the timeline in motion and internal checklist/deadlines
 - collaborator outreach and intake requirements (where applicable)
 - set up the budget and Streamlyne document development process including any cost-sharing for consideration of department, college and office of research administration.
- **1 month - 2 weeks before due date:** the budget should be finalized and the approval process should be initiated. This includes the department and college approvals, conflict of interest forms, the detailed budget and justification, proposal title, and preliminary specific aims (NIH), proposal summary (NSF), or contract scope of work (SOW). The following checklist should be followed:
 - Proposal budget
 - Internal budget commitments such as cost-sharing should be fully calculated/loaded at this time. Any college specific internal process for index source and approvals should be followed within this timeline.
 - Complete initial proposal details and internal Streamlyne information
 - Complete Streamlyne questionnaires
 - Proposal specific
 - Sponsor specific (as applicable for grants.gov for S2S submission)
 - Complete special review disclosures (as applicable)
 - IRB/human subjects
 - Biosafety
 - Animals
 - Export Controls
 - Conflict of Interest
- **2 weeks - 1 week before the due date:** submit all required internal attachments including:
 - Project Summary/Statement of Work
 - Final Budget
 - Budget Justification
 - For S2S Proposals – Complete additional input of placeholder attachments.
 - Submit in Streamlyne and monitor routing/review by key personnel and department/college administration.

- **72 hours – 24 hours before the submission deadline:** Prepare the final version for submission. The following actions will be managed during this period.
 - All final technical documents/attachments are completed and validated in internal and/or sponsor system(s).
 - Central Office completes final review and coordination with PI and College POC on final proposal review, validation of system requirements and engages in sponsor actions and submission.
 - Central office completes internal data and archiving procedures and coordinates follow-up
- **At least 24 hours before the submission deadline:** The PI should release the final version of the proposal to the SRA office at least 24 hours prior to the deadline for on-time submission.

For a successful submission, it is expected that faculty/PIs will follow up with the designated point-of-contact (ambassadors) for their college in a timely manner so that appropriate planning steps can be managed with respect to the proposal complexity, scope of support, any special needs such as cost-sharing, and multiple submission volume with the same due date. The following are the respective college point-of-contacts (ambassadors)

NCE: John McCarthy, NCE Director of Research; (973) 596-3247; john.p.mccarthy@njit.edu

NCE: Deidra Slough, Grant Management Specialist, (973)-596-3428; deidra.l.slough@njit.edu

CSLA: Cristo Leon, CSLA Director of Research; (973) 596-6426; cristo.e.yanezleon@njit.edu

CSTR: Felicia Margolies, Project Manager, (973)-596-5377 felicia.h.margolies@njit.edu

YWCC: Sean Andrews, YWCC Director of Research; (973) 596-5352; sean.t.andrews@njit.edu

HCoAD and MTSM: Interim POC: Justin Samolewicz, Director (Pre Award); (973)-596-3145; justin.m.samolewicz@njit.edu; **Iris Pantoja**, Project Manager; 973-596-4483; irp3@njit.edu (on maternity leave)

NJII and T&BD: Bobby J. Vadasserril; (973)-596-2941; bobby.j.vadasserril@njit.edu

Faculty and staff having any questions on proposal submission, may contact their college point-of-contacts (ambassadors), and also follow up with **Justin Samolewicz, Director (Pre Award)** 973-596-3145; justin.m.samolewicz@njit.edu; and **Eric Hetherington**, Executive Director, Sponsored Research Programs Administration 973-596-3631; eric.d.hetherington@njit.edu as needed.

Streamlyne User Manuals: <http://www.njit.edu/research/streamlyne/>

Steamlyne_NewUserManual_CommonElements.docx : This manual provides a reference to all the common elements of Streamlyne Research. This user manual is a good document to review each module's functionality.

Steamlyne_NewUserManual_PD&PDBudget.docx: This is a user manual on proposal and budget development in Streamlyne. The content herein explain the use and functionality of this module. This is the most useful Streamlyne document for PIs and users new to Streamlyne.

Need Information about Funding?

Finding Research Opportunities and Collaborations (FROC)

Walk-In Open-Hour Discussion with SVPR Over Tea

Every Thursday: 2.00 PM-3.00 PM; 340 Fenster Hall

The Office of Research has started a new service to help all faculty and staff explore collaborative research opportunities and currently active RFPs (Request for Proposals) for potential proposal development and

submission. Faculty and research staff members are welcome to meet with Senior Vice Provost for Research Atam Dhawan at the open-hour every Thursday from 3.00 PM to 4.00 PM to discuss research opportunities related issues including the following but not limited to:

- Research opportunities and potential collaborations
- Currently active RFPs and developing collaborative teams for proposal submission
- Proposal review criterion for specific RFP/program/agency
- Proposal concept and draft review in the context of review criterion
- Future plans for proposal development and submission
- Invention disclosures, patent applications and processing of intellectual property
- External faculty research awards including fellowships

Though *walk-ins* are welcome during the open-hour, faculty members are encouraged to email SVPR Atam Dhawan (dhawan@njit.edu) about specific questions on research opportunities and needs to be discussed in advance for more detailed discussion.

The open-hour session with individuals or small groups of faculty and research staff members is expected to focus on finding research opportunities, developing collaborative teams, exploring the review criterion and reviewing program requirements. Specific proposal submission and grant management issues can be discussed with Office of Research staff separately.

Enjoy coffee/tea and cookies with SVPR over the discussion.

For any questions and additional information, please send an email to SVPR at dhawan@njit.edu.
