

# RCA UPDATE

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February 18, 2020

## Funding Opportunity Edition

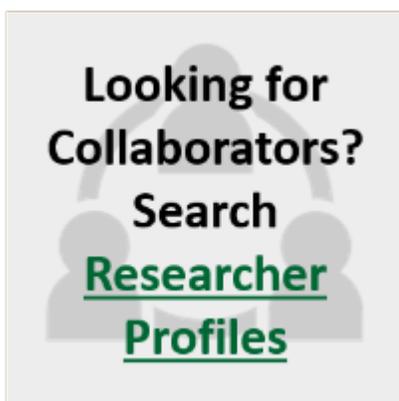
Today's issue of the RCA Update is a Funding Opportunity edition. Twice each month the RCA Update will completely focus on this information.

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## FUNDING OPPORTUNITIES

- [DARPA: Wideband Adaptive RF Protection \(WARP\)](#)
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*Please note: The NDSU Scholars Database website has been retired. This public-facing tool was targeted at sharing faculty Pivot profile information with individuals who did not have access to Pivot but may have wanted to find collaborators at NDSU. All faculty profile information is still available to Pivot users. Any links to the Scholars Database should be changed to <https://pivot.proquest.com/profiles/main>.*



Need to update your profile?  
Click here to learn how!

## **DARPA: Wideband Adaptive RF Protection (WARP)**

The Defense Advanced Research Projects Agency (DARPA) [seeks innovative proposals](#) to develop wideband, adaptive RF filters and cancellers that selectively attenuate interference and protect wideband digital radios from saturation. When exposed to interference/self-interference, the filters and cancellers will automatically sense and adapt to the electromagnetic environment through the intelligent control of its adaptive hardware. WARP will ultimately enable the use of wideband software defined radios in congested and contested environments.

*Proposal Deadline: May 21, 2020*

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## **DoD Pre-Announcements: Cancer Research Program and Orthopaedic Research Program**

The Department of Defense (DoD) [recently released pre-announcements](#) for the Fiscal Year 2020 (FY20) DoD Peer Reviewed Cancer Research Program and Peer Reviewed Orthopaedic Research Program managed by the office of Congressionally Directed Medical Research Programs (CDMRP).

### **Peer Reviewed Cancer Research Program**

- Virtual Cancer Center – Director Award
- Career Development Award – Fellow Option
- Career Development Award – Scholar Option
- Idea Award
- Impact Award
- Behavioral Health Science Award
- Translational Team Science Award

### **Peer Reviewed Orthopaedic Research Program**

- Applied Research Award
- Clinical Trial Award
- Clinical Translational Research Award

Descriptions of each of the anticipated funding opportunities, eligibility, key mechanism elements, and funding can be found in the Program pre-

announcements. FY20 pre-announcements can be found in the CDMRP home page features at <https://cdmrp.army.mil>.

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## **DOE: Solar Energy Technologies Office (SETO) 2020 Funding Program**

The U.S. Department of Energy (DOE) [announced](#) up to \$125.5 million in new funding to advance solar technology research. Through the Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office, DOE continues to advance research and development of solar technologies that reduce the cost of solar, increase the competitiveness of American manufacturing and businesses, and improve the reliability of the grid. Funding will support advancements in the following areas:

- Photovoltaics (PV) Hardware Research;
- Integrated Thermal Energy Storage and Brayton Cycle Equipment Demonstration (integrated TESTBED);
- Solar Energy Evolution and Diffusion Studies 3 (SEEDS 3);
- Innovations in Manufacturing: Hardware Incubator;
- Systems Integration;
- Solar and Agriculture: System Design, Value Frameworks, and Impacts Analysis;
- AI Applications in Solar Energy with Emphasis on Machine Learning;
- Small Innovative Projects in Solar (SIPS): PV and Concentrated Solar Power.

[Read the Funding Opportunity Announcement \[DE-FOA-0002243\] >>](#)

*Letter of Intent Deadline: March 9, 2020*

*Concept Paper Deadline: March 16, 2020*

*Full Application Deadline: May 21, 2020*

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## **DOE Notice of Intent: Connected Communities**

The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) [announced its intent](#) to issue a Funding Opportunity Announcement (FOA) entitled "Connected Communities."

The Connected Communities FOA would demonstrate and evaluate the capacity of energy-efficient buildings to interact with one another and the grid to provide greater degrees of demand flexibility at scale. It will also enable grid-interactive efficient building communities around the country to share research results and lessons learned on projects that increase grid reliability, resilience, security and energy integration well into the future.

The FOA would support EERE's [Grid-interactive Efficient Buildings](#) research initiative, which explores how smart building technologies and practices will enable American businesses and families to save energy and reduce their utility bills while protecting their comfort, productivity, and quality of life. EERE is working toward a future in which buildings can serve as reliable grid assets that operate dynamically with the grid to enhance efficiency, flexibility, and resilience.

EERE's [Building Technologies Office](#) would manage the FOA. EERE anticipates awarding 4-6 projects for up to \$7 million each in the form of cooperative agreements, or up to \$42 million. At present, EERE would intend to issue the FOA in the summer of 2020 via the EERE Exchange. The full Notice of Intent can be viewed [HERE](#).

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## **Facebook Research: Statistics for Improving Insights, Models, and Decisions**

Facebook is following up on the 2019 Statistics for Improving Insights and Decisions research awards to foster further innovation in this area and to deepen our collaborations with academia. External researchers can submit proposals to address challenges in applied statistics that have direct applications for producing more effective insights and decisions for data scientists and researchers. Facebook has a large, active and diverse community of practitioners, so they are interested in a varied set of statistical

topics, including but not limited to experimentation, forecasting, predictive modeling, survey and ground truth modeling and sampling.

The following are some specific examples of topics that are important to Facebook, but they will also review proposals for areas that are not listed below.

- Learning and evaluation under uncertainty.
- Statistical models of complex social processes.
- Causal inference with observational data.
- Efficient sampling and prevalence measurement.
- Design and analysis of experiments.
- Anomaly Detection.
- Interpretability techniques for AI models.

[Read the complete request for proposals >>](#)

*Proposal Deadline: March 25, 2020*

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## **Fulbright: Short-term Exchange Specialist Program**

The [Fulbright Specialist Program](#) offers opportunities to share expertise, gain international experience and develop collaborative partnerships through short-term, project-based exchanges of 2-6 weeks duration at institutions around the globe. It is worth noting that it is possible to receive multiple Fulbright awards, thus receiving a specialist award does not hinder your chances for a longer-term award at another time.

For more information, register for the program webinar:  
Thursday, February 20, 2020 | Noon | [Register >>](#)

*The Fulbright Specialist Program accepts applications on a year-round basis, and convenes peer review panels approximately six times per year. Deadlines for 2020 are now available on the [Specialist Application Process](#) page. The next two deadlines are **March 6, 2020** and **May 6, 2020**.*

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## **NDSU Foundation**

The NDSU Foundation Grants Committee is [accepting applications](#) from faculty and staff for five grant funds for the 2020 academic year. These grants are ways NDSU benefactors annually support NDSU faculty and staff. By providing funding through philanthropy, benefactors help enhance the NDSU experience by supporting faculty and staff innovation.

**The Centennial Endowment** can provide maximum awards of \$5,000, with a total of \$22,000 available. This grant fund supports professorships, scholarships, biotechnology, faculty development, libraries and cultural arts.

**The Board of Trustees Endowment** can provide maximum awards of \$1,000, with a total of \$5,000 available. This grant fund supports general programs across campus.

**The Library Endowment** has \$3,000 available to award. This grant fund supports requests from any academic unit on campus for materials that will enhance the collections and/or operations of university libraries.

**The Gordon A. Larson Foundation Fund** has \$18,000 available to award. This grant fund supports competitive grants for agricultural research efforts conducted at North Dakota State University.

**The Carl A. and Jean Y. White Memorial Endowment for Agriculture Research** has \$4,000 available to award. This grant fund supports faculty and research staff to encourage Agricultural research initiatives.

Contact Jennifer Reinhold [[jennifer.reinhold@ndsufoundation.com](mailto:jennifer.reinhold@ndsufoundation.com)] with any questions.

*Application deadline: March 30, 2020 by 5 p.m.*

*The NDSU Foundation will notify applicants of funding decisions by May 8, 2020.*

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## **NEA: Research Labs and Research Grants in the Arts**

These National Endowment for the Arts (NEA) grants provide an opportunity to engage with NEA's [five-year agenda for 2017-2021](#). The research agenda offers guidance on the types of study questions and topics that to appeal to the agency's long-term research goals.

[Research Grants in the Arts](#) support research that investigates the value and/or impact of the arts, either as individual components of the U.S. arts ecology or as they interact with each other and/or with other domains of American life. We are interested in research that identifies and examines:

- Factors that enhance or inhibit arts participation or arts/cultural assets;
- Detailed characteristics of arts participation or arts/cultural assets, and their interrelationships;
- Individual-level outcomes of arts participation, specifically outcomes corresponding with the following domains:
  - social and emotional well-being
  - creativity, cognition, and learning
  - physiological processes of health and healing; and
- Societal or community-level outcomes of arts/cultural assets, specifically outcomes corresponding with the following domains:
  - civic and corporate innovation
  - attraction for neighborhoods and businesses
  - national and/or state-level economic growth

The [NEA Research Labs program](#) intends to cultivate a series of transdisciplinary research partnerships, grounded in the social and behavioral sciences, to produce and report empirical insights about the arts for the benefit of arts and also for non-arts sectors such as healthcare, education, and business or management. NEA Research Labs will define their own related agendas, conduct project activities to implement that agenda, and prepare reports that will contribute substantively to a wider understanding of one of three areas of special interest to the Arts Endowment:

- The Arts, Health, and Social/Emotional Well-Being
  - Therapeutic Approaches and Benefits
  - Non-Therapeutic Approaches and Benefits
- The Arts, Creativity, Cognition, and Learning
- The Arts, Entrepreneurship, and Innovation

*Deadline: March 30, 2020*

## NEH: Fellowships

National Endowment for the Humanities (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.

Applicants interested in research projects that are either born digital or require mainly digital expression and digital publication are encouraged to apply instead for [NEH-Mellon Fellowships for Digital Publication](#).

*Application deadline: April 8, 2020*

## NIH: Collaborative Program Grant for Multidisciplinary Teams (RM1) - Limited Submission Program

[Limited submission grant programs](#) are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

NIH RM1: [Notify RCA](#) of your interest in participating in this program by February 20, 2020, 5pm.

This funding opportunity announcement ([FOA / PAR-20-103](#)) is designed to support highly integrated research teams of three to six PD/PIs to address ambitious and challenging research questions that are important for the mission of NIGMS and are beyond the scope of one or two investigators. Collaborative program teams are expected to accomplish goals that require considerable synergy and managed team interactions. Project goals should not be achievable with a collection of individual efforts or projects. Teams are encouraged to consider far-reaching objectives that will produce major advances in their fields. Applications that are mainly focused on the creation, expansion, and/or maintenance of community resources, creation of new technologies or infrastructure development are not appropriate for this FOA.

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## **NIH: Development of Innovative Informatics Methods and Algorithms for Cancer Research and Management (R21)**

The purpose of this Funding Opportunity Announcement ([FOA / RFA-CA-20-007](#)) is to invite exploratory/developmental research grant applications (R21) for the development of innovative methods and algorithms in biomedical computing, informatics, and data science addressing priority needs across the cancer research continuum including cancer biology, cancer treatment and diagnosis, early cancer detection, risk assessment and prevention, cancer control and epidemiology, and/or cancer health disparities. As a component of the NCI's [Informatics Technology for Cancer Research](#) (ITCR) Program, this FOA encourages applications focused on the development of novel computational, mathematical, and statistical algorithms and methods that can considerably improve acquisition, management, analysis, and dissemination of relevant data and/or knowledge. The central mission of ITCR is to promote research-driven informatics technology across the development lifecycle to address priority needs in cancer research. In order to be successful, there must be a clear rationale for how the proposed informatics method or algorithm is novel and how it will benefit the cancer research field. See also: R01 Companion opportunity – [RFA-CA-20-011](#).

*Letter of Intent deadline: May 9, 2020*

*Application deadline: June 9, 2020*



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

The National Institute of Environmental Health Sciences (NIEHS) invites qualified investigators from domestic institutions of higher education to submit an application for Superfund Research Program (SRP) R01 Individual Research Project grant program. This Funding Opportunity Announcement ([FOA / RFA-ES-20-004](#)) focuses on research that will advance effectiveness of bioremediation through incorporation of advanced, novel materials science approaches. Bioremediation refers to the use of biota (bacteria, algae, fungi, plants, etc.) to reduce or detoxify hazardous substances in the environment. Bioremediation is a cost-effective, low-energy-intensive remedy that has contributed to the cleanup and closure of sites impacted by hazardous substances. In recent decades, bioremediation has advanced from reliance upon culturing and biogeochemical processing to a technology-enabled field enhanced by high throughput molecular approaches (e.g. omics and gene editing techniques). These new approaches have elucidated molecular mechanisms responsible for contaminant cleanup and provided insight for potential solutions to naturally degrade emerging contaminants. Concurrent advances in materials science approaches present an opportunity to integrate new approaches to further refine the mechanisms of bioremediation and optimize conditions to accelerate natural degradation and/or stabilization processes. This FOA calls for teams including bioremediation materials science (nanotechnology, microenvironmental engineering) to submit proposals to advance the knowledge and practice of bioremediation to address current and emerging recalcitrant hazardous substances and complex mixtures.

*Letter of Intent Deadline: March 20, 2020*

*Application deadline: April 20, 2020*

## **NIST: Measurement Science and Engineering (MSE) Research Grant Programs**

The National Institute of Standards and Technology (NIST) is [soliciting applications](#) for Fiscal Year 2020 within the following NIST grant programs:

- the Associate Director for Innovation and Industry Services (ADIIS);
- the Associate Director for Laboratory Programs (ADLP);
- the Communications Technology Laboratory (CTL);
- the Engineering Laboratory (EL);
- Fire Research (FR);
- the Information Technology Laboratory (ITL);
- the International and Academic Affairs Office (IAAO);
- the Material Measurement Laboratory (MML);
- the NIST Center for Neutron Research (NCNR);
- the Physical Measurement Laboratory (PML);
- the Special Programs Office (SPO); and
- the Standards Coordination Office (SCO).

*Applications will be accepted and considered on a rolling basis as they are received.*

## **NSF: Spectrum and Wireless Innovation Enabled by Future Technologies**

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 / NSF 20-537](#)). 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.

*Proposal Deadline: April 3, 2020*

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## **Robert Wood Johnson Foundation: Investigator-Initiated Research to Build a Culture of Health**

[Evidence for Action \(E4A\)](#), a national program of the Robert Wood Johnson Foundation (RWJF), funds research that expands the evidence needed to build a Culture of Health. A Culture of Health is broadly defined as one in which good health and well-being flourish across geographic, demographic, and social sectors; public and private decision-making is guided by the goal of fostering equitable communities; and everyone has the opportunity to make choices that lead to healthy lifestyles. RWJF's Culture of Health Action Framework, which was developed to catalyze a national movement toward improved health, well-being, and equity, guides E4A's program strategy.

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## **Simons Foundation: Targeted Grants in Mathematics and Physical Sciences**

The Simons Foundation's Mathematics and Physical Sciences (MPS) division invites applications for its [Targeted Grants in MPS program](#). The program is

intended to support high-risk theoretical mathematics, physics and computer science projects of exceptional promise and scientific importance on a case-by-case basis.

*Proposals accepted on a rolling basis.*



Have questions, ideas, or suggestions for the RCA Update?

**Contact Us**



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*The Office of Research and Creative Activity (RCA) sends weekly emails to NDSU faculty and staff to provide current information on various topics including funding opportunities, grant program changes, research resources, deadlines, notices, and training.*

*You are receiving this notification through the NDSU official employee listserv or sub-list. The official listserv refreshes after each pay period.*

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