Strategic Resources
University of Puerto Rico
YEAR 2020 - VOLUME III
APRIL 27, 2020
AUTORIZADO POR LA COMISIÓN ESTATAL DE ELECCIONES
CEE-SA-2020-7751

UPR external funding success is of utmost importance to strengthen the connection between its investigators/faculty and funding entities who have the potential to sponsor their research and academic endeavors. This publication has been developed in order to summarize funding opportunities and promote the participation of faculty and collaborative research groups in their intent to apply for external funds. Such efforts are aligned with the UPR Strategic Plan 2017-2022: A New Era of Innovation and Transformation for Student Success; Certification 50 (2016-2017) of the Governing Board, December 19, 2016. Strategic Area: Research and Creative Work. Goal 2: Increase Applications for and awards of external funds for research and creative work.

SELECTED FUNDING OPPORTUNITIES

This is a selection of identified funding opportunities for the period ending 04/07/2020 and is in no way all-inclusive of funding opportunities available. Further information has been shared with External Resource Coordinators and Research Coordinators at each UPR campus by e-mail or MS Teams.

1. University Leadership Initiative (ULI), National Aeronautics and Space Administration (NASA)

Application Deadline: June 30, 2020

ULI provides the opportunity for university teams to exercise technical and organizational leadership in proposing unique technical challenges, defining interdisciplinary solutions, establishing peer review mechanisms, and applying innovative teaming strategies to strengthen the research impact. By addressing the most complex challenges associated with ARMD strategic thrusts, universities will accelerate progress toward achievement of high impact outcomes while leveraging their capability to bring together the best and brightest minds across many disciplines. In order to transition their research, Principal Investigators (PIs) are expected to actively explore transition opportunities and pursue follow-on funding from stakeholders and industrial partners during the course of the award.

Research proposals are sought in seven ULI topic areas in Appendix D.4.:

- Topic 1: Safe, Efficient Growth in Global Operations (Strategic Thrust 1)
- Topic 2: Innovation in Commercial Supersonic Aircraft (Strategic Thrust 2)
- Topic 3: Ultra-Efficient Subsonic Transports (Strategic Thrust 3)
- Topic 4: Safe, Quiet, and Affordable Vertical Lift Air Vehicles (Strategic Thrust 4)
- Topic 5: In-Time System-Wide Safety Assurance (Strategic Thrust 5)
- Topic 6: Assured Autonomy for Aviation Transformation (Strategic Thrust 6)
- Topic 7: Novel In-Flight and Ground Measurement Techniques for Hypersonic Flight

This NRA will utilize a two-step proposal submission and evaluation process. The initial step is a short mandatory Step-A proposal due June 30, 2020. Those offerors submitting the most highly rated Step-A proposals will be invited to submit a Step-B proposal. All proposals must be submitted electronically through NSPIRES at https://nspires.nasaprs.com.
Proposals are requested for a three-year period of performance with nominal budgets in the $1M/year range. Based on the team performance consideration for a fourth year is possible.

An Applicant's Workshop will be held on Thursday April 30, 2020; 1:00-3:00 p.m. ET (https://ac.arc.nasa.gov/ppbriefing/ and sign in as a "Guest" using your full name).

Link to Additional Information: https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B349AB2FC-DD8D-7BD5-18D4-4DFDC53425E2%7D&path=&method=init

2. Educational Materials for Professional Organizations Working on Efficiency and Renewable Energy Developments (EMPOWERED), Department of Energy

Application Deadline: July 8, 2020

The Educational Materials for Professional Organizations Working on Efficiency and Renewable Energy Developments (EMPOWERED) funding program is a collaborative effort across EERE's Solar Energy Technologies Office (SETO), Vehicle Technologies Office (VTO), and Building Technologies Office (BTO), to provide professionals with educational materials and training resources in fields newly interacting with distributed energy resources (DER). In this program, DER includes distributed solar, like on homes and businesses, as well as efficient building technologies and sustainable transportation technologies, such as electric vehicles. The goal of this program is to create resources that will help those on the front lines of DER adoption—like first responders, safety officials, and building managers and owners keep up with these rapidly emerging and advancing technologies. These professionals are at the forefront of America's energy transition and play a role in easing adoption, ensuring safety, and reducing installation costs. Because of this, the participating EERE offices see these professionals as key to enabling understanding and acceptance of new energy technologies. SETO, BTO, and VTO seek applicants that will create and integrate education and training materials for professionals who have significant involvement and authority over implementing solar, building, or vehicle technologies on the distribution system but who do not work primarily with these technologies. Those technologies include but are not limited to DER - like PV systems, building efficiency technologies, energy storage systems, AFV, EV - and EV infrastructure.

Link to Additional Information: https://eere-exchange.energy.gov/Default.aspx#FoaId9a1ce57e-4d33-4a00-a502-b9c7cef91bb4

3. Opportunities for Promoting Understanding through Synthesis, National Science Foundation

Application Deadline: August 3, 2020

Synthesis is an essential, yet time-consuming, component of scientific inquiry. Academic careers often do not allow researchers to dedicate a substantial amount of time to reflect on and synthesize their research. However, without such syntheses, the full importance of individual works is often lost, preventing other researchers, now and into the future, from accessing the added value provided by synthesis. Additionally, data transparency and interoperability are essential to the advancement of the scientific enterprise. To promote this important work, all four clusters within the Division of Environmental Biology (Population and Community Ecology, Ecosystem Science, Evolutionary Processes, and Systematics and Biodiversity Science) encourage the submission of OPUS proposals focused on synthesis of past research or on harmonization of existing data sets. All proposals should aim to expand understanding and develop new insights that could not be achieved without the synthesis. The focus and scope of research questions must be consistent with the program descriptions of one or more of the four clusters within the Division of Environmental Biology.

OPUS provides an opportunity for an investigator or a group of investigators at any career stage to revisit and synthesize a significant body of their prior research or to harmonize distinct data sets that they have produced to enable new understanding. This program targets investigators who have, over time, produced significant work and data from a series of research projects, and who are planning to integrate that work in a single synthesis. Proposals requesting support mainly for the production of new data are not appropriate. Likewise, efforts simply to summarize previous results will not be supported. We expect OPUS awards to generate novel understanding, new questions, or emergent insights that are more than the sum of their individual parts.

OPUS projects generally result in one or more products resulting from synthetic activities. Products from past awards have been diverse and include, but are not limited to, any combination of scientific papers, monographs, software, websites, books, films, synthesized datasets, or databases. Individuals contemplating submission of an OPUS proposal are encouraged to look at the abstracts of previously funded research to see what kinds of synthetic products have been supported.

Link to Additional Information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf20564

4. Utilizing Cohort Studies to Address Health Outcomes in Cancer Survivors, DHHS, NIH

Application Deadline: July 7, 2020

Through this Funding Opportunity Announcement (FOA), the NCI invites applications to support research in new and innovative cohort studies that identify clinical, lifestyle, genomic, and other factors that affect health outcomes (e.g., morbidity, mortality, quality of life, physical, social, and psychological outcomes) in cancer survivors. This RFA supports research that requires the creation of a new prospective cohort study of cancer survivors that addresses a gap in knowledge pertaining to the health of cancer survivors. Proposals must identify the scientific gap that the study addresses, which may include emerging treatments, less common cancer sites, and/or other understudied populations of cancer survivors with disparities. Sample size and proposed data collection must be driven by the scientific questions proposed and include information from the following five domains:

1) disease characteristics (e.g., type, stage),
2) individual survivor characteristics (e.g., comorbidities, SES, social connections, access to care measures),
3) treatment, treatment-related effects, and follow-up care (e.g. dose, adverse events, palliative care),
4) behavioral and lifestyle factors (e.g., diet, physical activity), and,
5) quality of life outcomes (health related quality of life).

These domains may represent exposures and/or outcomes, depending on the research questions, and should be measured at multiple timepoints, when appropriate. The UG3 Planning-Exploratory Phase focused on recruitment and data collection/utilization, and the UH3 Implementation Phase focused on completing the research agenda. Milestones to be accomplished in the UG3 phase for transition to the UH3 will be proposed by the PI, with approval by NCI, and must include a timeline for recruitment and show feasibility for data collection and analysis. Recruitment is not required to be completed in the UG3 phase, but reasonable progress should be demonstrated so that all aims will be completed in the UH3 phase.

Link to Additional Information: http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-20-030.html

5. Cyber-Physical Systems National Science Foundation

Application Deadline: June 22, 2020

Cyber-physical systems (CPS) are engineered systems that are built from, and depend upon, the seamless integration of computation and physical components. Advances in CPS will enable capability, adaptability, scalability, resiliency, safety, security, and usability that will expand the horizons of these critical systems. CPS technologies are transforming the way people interact with engineered systems, just as the Internet has transformed the way people interact with information. New, smart CPS drive innovation and competition in a range of application domains including agriculture, aeronautics, building design, civil infrastructure, energy, environmental quality, healthcare and personalized medicine, manufacturing, and transportation. CPS are becoming data-rich enabling new and higher degrees of automation and autonomy.

Traditional ideas in CPS research are being challenged by new concepts emerging from artificial intelligence and machine learning. The integration of artificial intelligence with CPS especially for real-time operation creates new research opportunities with major societal implications. While tremendous progress has been made in advancing CPS technologies, the demand for innovation across application domains is driving the need to accelerate fundamental research to keep pace. At the same time, the CPS program seeks to open new vistas for the research community to think beyond the usual cyber-physical paradigms and structures and propose creative ideas to address the myriad challenges of today's systems as well as those of the future that have not yet been designed or fielded.

The CPS program aims to develop the core research needed to engineer these complex CPS, some of which may also require dependable, high-confidence, or provable behaviors. Core research areas of the program include control, data analytics, and machine learning - including real-time learning for control, autonomy, design, Internet of Things (IoT), mixed initiatives including human-in- or human-on-the-loop, networking, privacy, real-time systems, safety, security, and verification. By abstracting from the particulars of specific systems and application domains, the CPS program seeks to reveal cross-cutting, fundamental scientific and engineering principles that underpin the integration of cyber and physical elements across all application domains. The program additionally supports the development of methods, tools, and hardware and software components based upon these cross-cutting principles, along with validation of the principles via prototypes and testbeds. This program also fosters a research community that is committed to advancing education and outreach in CPS and accelerating the transition of CPS research into the real world.

Link to Additional Information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf20563

6. Convergence Accelerator Phase I and II, National Science Foundation

Application Deadline: June 22, 2020

The goals of NSF's convergence accelerator effort are to support and accelerate use-inspired convergence research in areas of national importance within particular topics (tracks). NSF Convergence Accelerator tracks can be related to Industries of the Future (IotF), NSF's Big Ideas, or other topics, that may not relate directly to an IotF or Big Idea, however, they must have the potential for significant national impact. The 2020 NSF Convergence Accelerator is a two-phase program. Both phases are described in this solicitation.
Phase I awardees receive significant resources to further develop their convergence research ideas and identify crucial partnerships and resources to accelerate their projects, leading to deliverable research prototypes in Phase II. This solicitation invites proposals for the following Tracks:

- Quantum Technology (Track C)
- AI-Driven Innovation via Data and Model Sharing (Track D)

The NSF Convergence Accelerator leverages fundamental research leading to rapid advances that can deliver significant societal impact. Proposers must first submit a Phase i preliminary proposal in order to be invited to submit a full Phase I proposal. The information required in the preliminary proposal is described in section V. Phase I proposals must describe a team, or a process to build a team, that includes personnel with the appropriate mix of disciplinary and institutional expertise needed to build a Phase II convergence research effort. Phase I proposals must describe one or more deliverables and how those research outputs could impact society by the end of Phase II.

Phase I proposals should describe the deliverable and the research plan and team formation efforts that will refine it to a proof-of-concept. Phase I will include NSF-organized convenings for training and intra- and cross-cohort collaboration. Phase I awards are expected to be for up to 9 months and up to $1M each. Only awardees of Phase I grants under this solicitation may submit a Phase II proposal. Phase II proposers must outline a two-year research and development plan in which research transitions to practice through collaboration with end-users.

Phase II proposals must describe clear deliverables that will be produced in two years of effort and the metrics by which impacts will be assessed. The Phase II teams must include appropriate stakeholders (e.g., industry, Institutions of Higher Education (IHEs), non-profits, government entities, and others), each with a specific role(s) in facilitating the transition of research outputs into practical uses. Successful proposals will be funded initially for one year. Each team's progress will be assessed during the year through approximately six virtual and in-person meetings with NSF program staff. The overall progress will be evaluated at the end of one year, based on a report and presentation that the team will make to a panel of reviewers. Teams that show significant progress during the first year, in accordance with the agreed timetable of milestones and deliverables, will receive funding for a second year. Teams should plan on completing the effort within two years; no-cost extensions will be authorized only in extraordinary circumstances.

Link to Additional Information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf20565

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