December 20, 2023

Dear Associate Deans for Research and Department Heads,

Please see below for a partial list of funding information that may be of interest to members of your faculty.

PLEASE NOTE: Pivot [formerly Community of Science (COS)] E-mail Alerts, set up individually by faculty members, are Purdue's primary resource for timely funding information in all disciplines. More information about Pivot and other e-mail alert services and search tools may be found [here](#).

1. **Limited Submissions:**

    Preproposals and rankings should be submitted via Purdue's InfoReady portal (https://purdue.infoready4.com/). Purdue's open limited submission competitions, templates, and limited submission policy may be found at http://www.purdue.edu/research/funding-and-grant-writing/limited-submissions.php. For any case in which the number of preproposals received is no more than the number of proposals allowed by the sponsor, the OOR will notify the PI(s) that an internal competition will be unnecessary. Questions should be addressed to EVPRPlimited@purdue.edu.

    Limited Submission: **None this week**

2. **Selected Funding Opportunities**:

    NSF Future of Semiconductors (FuSe2) The goal of this Future of Semiconductors (FuSe2) solicitation is to cultivate holistic, co-design approaches to fundamental research and workforce education and training in order to enable rapid progress in new semiconductor technologies. The future of semiconductor manufacturing will require the design and deployment of diverse new technologies in materials, chemical and materials processes, devices, and architectures through the development of application-driven systems. Partnerships between industry and academic institutions are essential to spurring this innovation, enabling technology transfer, informing research infrastructure needs, and training the future workforce. Deadline: March 14

    NSF Long-Term Ecological Research (LTER) To address ecological questions that cannot be resolved with short-term observations or experiments, NSF established the Long-Term Ecological Research Program (LTER) in 1980. Two components differentiate LTER research from projects supported by other NSF programs: 1) the research is located at specific sites chosen to represent major ecosystem types or natural biomes, and 2) it emphasizes the study of ecological phenomena over long periods of time based on data collected in five core areas. Ongoing research at LTER sites is expected to contribute to the development and testing of fundamental ecological theories and significantly advance understanding of the long-term dynamics of populations, communities, and ecosystems. Deadline: March 14

    NSF Strengthening American Infrastructure (SAI) SAI is an NSF program seeking to stimulate human-centered, use-inspired, fundamental and potentially transformative research aimed at strengthening America's infrastructure. SAI focuses on how fundamental knowledge about human reasoning and decision-making, governance, and social and cultural processes enables the building and maintenance of effective infrastructure that improves lives and society and builds on advances in technology and engineering. Successful projects will represent a convergence of expertise in one or more social, behavioral or economic sciences, deeply integrated with other disciplines to support substantial and potentially pathbreaking fundamental research applied to strengthening a specific focal infrastructure. Deadline: March 12

    NSF Collaborations in Artificial Intelligence and Geosciences (CAIG) The Collaborations in Artificial Intelligence and Geosciences (CAIG) program seeks to advance the development and adoption of innovative artificial intelligence (AI) methods to increase scientific understanding of the Earth system. The program supports projects that advance AI techniques and/or innovative uses of sophisticated or novel AI methods to enable

significant breakthroughs in addressing geoscience research question(s). The program also supports efforts that increase adoption of innovative AI-driven approaches among geoscientists, including by expanding access to cyberinfrastructure (CI) and by building capacity for use of AI methods among diverse groups and institutions. Deadline: March 15

[NSF Partnerships in Astronomy & Astrophysics Research and Education (PAARE)](#) The objective of PAARE is to improve the quality and environment of astronomy and astrophysics research and education by stimulating the development of formal, long-term partnerships that provide authentic pathways into the research enterprise and broaden participation in astronomy by encouraging proposals from the full spectrum of talent across society to include individuals from groups that have been historically underrepresented. Partnerships must substantially involve institutions seeking to create opportunities for student and faculty research that will increase the recruitment, retention, and success of these individuals. It is expected that the partnerships will build or strengthen research capacity, as well as foster a diverse, inclusive, and equitable environment for astronomy and astrophysics research and education at the partnering institutions. Deadline: March 12

[NSF Dear Colleague Letter: Planning Grants to Broaden Participation in the Emerging Frontiers in Research and Innovation Program](#) Planning grants funded through this DCL are expected to cultivate potential EFRI research teams that actively address broadening participation and inclusion goals expressed in this DCL and to develop a competitive EFRI proposal for the FY 2025 cycle of the current EFRI solicitation. As a result of planning grant activities, potential EFRI teams should be better equipped to carry out potentially transformative research that addresses the Biocomputing through EnGINeering Organoid Intelligence (BEGIN OI) EFRI topic. Proposers supported through this mechanism may use the funding to organize activities that help stimulate the formation of EFRI teams (in terms of PI, Co-PI, Senior Personnel, and organization type) and crystalize the ideas and research plans to be presented in a potential EFRI proposal. Deadline: February 23

[NIH Discovery of in vivo Chemical Probes for the Nervous System (R01)](#) The purpose of this NOFO is to support investigators who have interest and capability to join efforts for the discovery of in vivo chemical probes for novel brain targets. It is expected that applicants will have, in hand, the starting compounds (validated hits) for chemical optimization and bioassays for testing new analog compounds. Deadline: February 5

[NIH Bat Immunology Network Research Projects (R01)](#) The purpose of this NOFO is to support research to characterize cellular and molecular constituents of the bat immune system and to understand protective innate and adaptive immune mechanisms in bats. Research projects supported by this NOFO will form a collaborative research network to advance understanding of the bat immune response. Deadline: May 24

[NIH Development of Innovative Informatics Methods and Algorithms for Cancer Research and Management (R21)](#) The purpose of this NOFO is to invite exploratory/developmental research grant applications (R21) for innovative informatics methods and algorithms to improve the acquisition, analysis, visualization, or interpretation of data 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. Deadline: June 11

[NIH Early-Stage Development of Informatics Technologies for Cancer Research and Management (U01)](#) The purpose of this NOFO is to invite Cooperative Agreement (U01) applications for the development of enabling informatics technologies to improve the acquisition, management, analysis, and dissemination of data and knowledge 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. This NOFO focuses on early-stage development from prototyping to hardening and adaptation. Deadline: June 11

[NIH Advanced Development of Informatics Technologies for Cancer Research and Management (U24)](#) The purpose of this NOFO is to invite Cooperative Agreement (U24) applications for advanced development and enhancement of emerging informatics technologies to improve the acquisition, analysis, visualization, and interpretation of data across the cancer research continuum including cancer biology, cancer treatment and diagnosis, early cancer detection, risk assessment and prevention, cancer control and epidemiology, and cancer health disparities. This NOFO focuses on emerging informatics technology, defined as one that has passed the initial prototyping and pilot development stage, has demonstrated potential to have a significant and broader impact, has compelling reasons for further improvement and enhancement, and has not been widely adopted in the cancer research field. To be successful, proposed development plans must have a clear rationale on why the proposed technology is needed and how it will benefit the cancer research field. Deadline: June 11

[NIH Sustained Support for Informatics Technologies for Cancer Research and Management (U24)](#) The purpose of this NOFO is to invite Cooperative Agreement (U24) applications for the continued development and sustainment of high value informatics research resources to improve the acquisition, management, analysis, and dissemination of data and knowledge 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 NOFO focuses on sustaining operations and improving the user experience and availability of existing, widely-adopted informatics tools and resources. Deadline: June 11

[NIH Bat Immunology Network Research Resource Program (U24)](#) The purpose of this NOFO is to support the development and validation of reagents/tools to support research to characterize cellular and molecular constituents of the bat immune system and for the study of protective innate and adaptive immune mechanisms in bats. The Research Resource Program established by this NOFO will participate within a collaborative research network to advance understanding of the bat immune response. Deadline: May 24

[NIH Notice of Special Interest (NOSI): Quantum Sensing Technologies in Biomedical Applications](#) The goal of this NOSI is to support innovative and potentially transformative research projects in quantum science and sensing toward biomedical disciplines. This includes approaches to improve current biomedical imaging and bioengineering tools and technologies using quantum sensing for drug delivery, novel therapeutics, detection, diagnosis, treatment, and monitoring of various diseases. This NOSI further aims to catalyze application of innovative quantum-enabled technologies that leverage quantum sensing properties (coherence, interference, superposition and entanglement) of various materials (e.g., color centers, solid-state defects, 2D quantum materials), superconducting circuits, atomic magnetometry, integrated photonics, non-classical sources of light, quantum optical effects, hyperpolarized spin states, entangled photons, tunneling, quantum correlation, or other quantum phenomena. Deadline: On-going

[DOE-EERE Hydrogen and Fuel Cell Technologies Office FOA to Advance the National Clean Hydrogen Strategy](#) RDD&D activities to be funded under this FOA will support the government-wide approach to the climate crisis by driving the innovation that can lead to the deployment of clean energy technologies, which are critical for climate protection. Specifically, this FOA will support the goals of the H2@Scale Initiative, which aims to advance affordable hydrogen production, transport, storage, and utilization to enable decarbonization and revenue opportunities across multiple sectors. Topics of interest include: Components for Hydrogen Fueling of Medium- and Heavy-Duty Vehicles; Standardized Hydrogen Refueling Station of the Future; Hydrogen Fuel-Cell Powered Port Equipment; Enabling Permitting and Safety for Hydrogen Deployment; and Equitable Hydrogen Technology Community Engagement. Deadlines: January 26 – Concept paper; March 22 – Application

[DOE-EERE Solar Energy Evolution and Diffusion Studies 4 (SEEDS 4)](#) This FOA is being issued by the DOE's Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO) to invest in innovative social science research that generates actionable insights to improve large-scale solar (LSS) siting processes and outcomes for host communities—particularly those that are disadvantaged—and the solar industry. This topic will fund research programs that study the social dimensions of large-scale solar siting. This includes the dynamics of community acceptance of proposed projects, the role of public attitudes and other

factors in the permitting process, and impacts of large-scale solar projects on communities. Deadlines: January 30 – Concept paper; March 15- Application

[DOE-SC Early Career Research Program](#) DOE SC hereby invites applications for support under the ECRP in the following program areas: Advanced Scientific Computing Research (ASCR); Basic Energy Sciences (BES); Biological and Environmental Research (BER); Fusion Energy Sciences (FES); High Energy Physics (HEP); Nuclear Physics (NP); Isotope Research and Development (R&D) and Production (DOE IP); and Accelerator R&D and Production (ARDAP). The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by SC. Deadline: April 25

[DOD U.S. Army Research Institute for the Behavioral and Social Sciences Broad Agency Announcement for Basic Research](#) This Broad Agency Announcement (BAA) for the Foundational Science Research Unit (FSRU) of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) solicits new proposals for its fiscal year 2025 program of basic research in behavioral science. The Basic Research program focuses on three strategic areas for advancing personnel science: 1. Science of Measurement of Individuals and Collectives; 2. Understanding Multilevel and Organizational Dynamics; and 3. Formal/Informal Learning and Development. Deadlines: March 1 – Abstract; July 1 - Proposal

[DOD DEVCOM Army Research Laboratory Broad Agency Announcement for Trapped Ions & Neutral Atoms Quantum Computing (TINA QC)](#) This is a proposed four-year program and is primarily focused on three topic areas in the field of quantum computing (QC) with trapped ions and neutral atoms. The topic areas are as follows: (1) Modular Atoms (MA); (2) Fast Atoms (FA); and (3) Versatile Atoms (VA). Research proposals to these topics are sought that address the circuit gate-based model of quantum computation, be suitable for universal control in multi-qubit architectures, and make progress towards fault-tolerant quantum computing. Deadlines: January 23 – White paper; April 9 - Proposal

[DOD Boosting Innovative GEOINT - Science & Technology Broad Agency Announcement](#) The Boosting Innovative GEOINT-Science and Technology (BIG-ST) Broad Agency Announcement (BAA) invites proposers to submit innovative concepts to address hard GEOINT problems that align to one or more of the following technical domains: (1) Foundational GEOINT, (2) Advanced Phenomenologies, and (3) Analytic Technologies. No submissions shall be accepted to the general solicitation; abstracts and proposals will only be reviewed in response to Topic Calls. **Currently, Topic 1 - Geospatial-Intelligence Foundational Model (GFM) is active.** The goal of this research will be to deliver a geographically aware foundational model--or assembly of foundation models--that can form components of a powerful virtual assistant for analysts to geolocate media or objects or answer questions requiring specific geospatial understanding. Deadlines: January 23 – Abstract; March 4 - Application

[USDA-NIFA Agriculture and Food Research Initiative (AFRI) Competitive Grants Program Foundational and Applied Science Program](#)   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). Deadline: Varies

[NASA-ROSES Instrument Incubator Program](#) The Instrument Incubator Program (IIP) supports the development of innovative remote sensing technologies for Earth observing instruments, sensors, and systems in support of Earth science. The technologies and measurement concepts developed under the IIP may extend through field demonstrations, with a longer-term aim for infusion into future Earth Science Division research, applications, and flight programs. Deadlines: February 16 – NOI; April 2 - Application

[*NASA-ROSES Earth Action: Community Action for Equity and Environmental Justice*](#) NASA seeks to advance equity and environmental justice (EEJ) through the creation of geospatial tools that integrate Earth science and socio-economic information, expand the communities of practice that use Earth observations to address environmental justice issues, and inform action. NASA requests proposals developed in collaboration with underserved and overburdened communities, that involve a co-design process to address community interests to use Earth science information in decisions, actions, and policies. Each proposal should address three components: 1) Assessment and Consultation, 2) Tool Design, Test, and Implementation, and 3) Evaluation and Capacity Building. Deadlines: January 16 – NOI; March 14 - Application

[*NASA-ROSES Earth Action: Supporting Climate Resilient Communities*](#) The NASA Earth Science Division (ESD) solicits proposals that support communities in building their resilience to climate impacts through the application of NASA Earth observations. The focus of proposals must be on informing decisions that enhance community-level resilience to episodic and chronic climate stressors. Proposals must engage communities in advancing climate-informed decisions that enhance their resilience to the impacts of climate change and involve organizations that assist in knowledge sharing between scientists and decision makers. Deadlines: February 23 – NOI; May 3 - Proposal

[*Damon Runyon Cancer Research Foundation: Scholars Program for Advancing Research and Knowledge (SPARK)*](#) The goal of the program is to provide students who have the potential to become leaders in cancer research with rigorous scientific training and a network of mentors and peers to support their next steps into graduate school and beyond. SPARK is designed to support scholars at an even earlier stage in the research pipeline and eliminate barriers to a career in academic research. Eligible candidates are: from a racial, ethnic, or other group underrepresented in biomedical fields; US citizen, permanent resident, or DACA recipient; committed to a future career in research. Deadline: February 2

[*Simons Foundation Targeted Grants in MPS*](#) This 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. Deadline: Rolling

[*Mark Foundation for Cancer Research: Endeavor Award*](#) The Mark Foundation Endeavor Awards support collaborative research projects that bring together investigators with diverse areas of expertise to tackle challenges in the prevention, diagnosis, and treatment of cancer. These grants are awarded to teams of three or more investigators to generate and integrate data from diverse lines of research and transform those insights into advances for cancer patients that could not be achieved by individual efforts. Deadline: LOIs can be submitted January 3 and after. Deadline TBD.

[*Mark Foundation for Cancer Research: Emerging Leader Award*](#) The Mark Foundation Emerging Leader Awards support innovative cancer research from the next generation of leaders. These grants are awarded to outstanding early career investigators to support high-impact, high-risk projects that are distinct from their current research portfolio. Deadlines: April 29 – LOI; July 22 - Application

3. **Anticipated Funding Opportunities**

[*DOE Notice of Intent to Issue FOA Entitled Regional Resource Hubs for Purpose-Grown Energy Crops*](#)

4. **Other:**

[*NSF Notice to research community: Use of generative artificial intelligence technology in the NSF merit review process*](#)

Purdue faculty and research staff: To directly receive this newsletter in your inbox, please sign up for the listserv here: https://lists.purdue.edu/mailman/listinfo/weeklyfundingopps. Only *purdue.edu* e-mail addresses will be accepted.****

As always, we appreciate your sharing this information with your faculty. Please contact Sue Grimes (sgrimes@purdue.edu) with any questions or comments related to this e-mail.