Funding Opportunities as of December 16, 2020

Opportunities Listed by Deadlines

1. **ORAU-Directed Research and Development (ODRD) Program Call for Proposals**
   
   **Interest Statement Deadline:** December 20, 2020, 11:59 PM
   **Proposal Deadline:** February 1, 2021
   
   All ODRD funding dedicated to research projects will go towards the following three FY21 priority focus areas: Public Health; Data Science and Analytics; and Diversity, Equity, and Inclusion Studies. More information about the specific areas of emphasis within these priorities is outlined in the FY21 ODRD Priority Focus Areas document.

   One or more awards will be made in each focus area, and up to $150,000 is available for each award. Proposals may span one or more of the priority focus areas, and crosscutting proposals are encouraged. Proposals are due February 1st, and must be submitted by an ORAU subject matter expert.

   University faculty interested in collaborating on a research idea may submit a brief collaboration interest statement here: [https://www.orau.org/university-partnerships/member-grant-programs/odrd.html](https://www.orau.org/university-partnerships/member-grant-programs/odrd.html). These statements are due no later than 11:59pm on December 20th, and will be shared with ORAU researchers who may reach out to initiate collaborations and begin the proposal development process. *This interest statement has replaced the previous Research Concept submission process.*

   Please direct questions to [Casey Thomas](mailto:casey.thomas@orau.org).

2. **DOE to Provide $9 Million for Research on High Energy Density Plasmas**
   
   **Letter of Intent Deadline:** December 20, 2020
   **Application Deadline:** February 21, 2021
   
   The U.S. Department of Energy’s (DOE) Office of Science and DOE’s National Nuclear Security Administration (NNSA) jointly announced a plan to provide up to $9 million for work related to High-Energy Density Laboratory Plasmas (HEDLP). Applications will be open to domestic universities, industry, and nonprofit research institutions. Funding will be awarded based on competitive peer review.

   HEDLP researchers study ionized matter in laboratory experiments, to explore the behavior of matter at extreme conditions including temperature, density, and pressure. In addition to the many applications of HEDLP in various fields, this research is useful for both plasma science and the study of matter at the atomic scale.


3. **Georgia Tech's National Center for Sustainable Transportation (NCST) Request for Proposals**
   
   **Deadline:** December 23, 2020, Midnight EST
The National Center for Sustainable Transportation (NCST) at Georgia Tech invites affiliated researchers to submit sustainable transportation applied research proposals for funding. The Center will fund up to six projects that focus on sustainable transportation policies, strategies, and/or specific activities. The projects should include compelling engineering, planning, and/or policy contexts. Projects are expected to employ complex systems modeling approaches and provide detailed assessments of changes in energy and emissions and/or system costs. The NCST Leadership Council has encouraged the Center to support technical research in the area of new transportation technologies and mobility services, sustainable transportation solutions in rural and suburban contexts, the interaction of electric vehicles and the power grid, and improving freight efficiency and environmental performance. Please submit proposals by e-mail to Robert Carswell.

More details here.

4. **Clean Energy Smart Manufacturing Innovation Institute (CESMII)**  
   **Deadline:** December 31, 2020, 11:59 PM PDT  
The U.S. Department of Energy’s (DOE’s) Clean Energy Smart Manufacturing Innovation Institute (CESMII) announced up to $4 million in new funding to improve energy-intensive manufacturing processes and strengthen America’s manufacturing sector. To accelerate the adoption of Smart Manufacturing (SM) technologies, CESMII seeks research and development projects that can apply SM solutions to real-world manufacturing process and operation challenges that enable improved energy productivity, performance, quality and efficiency.

For this request for proposals, CESMII anticipates making awards with periods of performance of up to six months. Industry partners must provide at least 50% of the total project funding. Projects may range from $50,000 to $200,000 (federal + cost share).

Learn more about the application deadlines, areas of emphasis, and submission requirements.

5. **High Performance Computing for Energy Innovation**  
   **Deadline:** Concept Papers - January 7, 2021  
The U.S. Department of Energy announced up to $3.75 million for new projects that use high-performance computing (HPC) to solve key challenges related to manufacturing and advanced materials development. The High Performance Computing for Energy Innovation (HPC4EI) initiative provides industry access to U.S. National Laboratory-based supercomputing capabilities and expertise to lower the risk of HPC adoption and broaden its use. Through this funding opportunity, the HPC4EI initiative seeks qualified industry partners to apply advanced modeling, simulation, and data analysis to accelerate innovation for next-generation technologies.

The High Performance Computing for Manufacturing (HPC4Mfg) program is interested in establishing collaborations that address energy-related challenges for domestic manufacturers, including manufacturing process improvements, decreased lifecycle energy consumption of products of interest, and increased efficiency for energy conversion and storage technologies.

The High Performance Computing for Materials (HPC4Mtls) program seeks industry partnerships to address challenges in developing, modifying, and/or qualifying new or modified materials that perform well in severe or complex environments, involving projects related to the materials supply chain for fossil energy applications, and new and existing power plant applications.

Selected projects will be awarded up to $300,000 to support computing cycles and work performed by DOE National Laboratories, along with universities and non-profit partners. The industry partner must provide a participant contribution of at least 20% of the total project funding. Applicants to this solicitation are highly encouraged to partner with universities and non-profit organizations located within federally designated Opportunity Zones and/or Historically Black Colleges and Universities (HBCUs). Eligibility for HPC4Mfg and HPC4Mtls is limited to entities that manufacture products, develop materials, or operate systems in the U.S. for commercial applications, as well as the organizations that support them. All DOE National Laboratories are eligible to participate.

More info is available at:  

6. **Georgia Tech CDAIT Student IoT Innovation Capacity Building Challenge 2021 Competition**  
   **Deadline:** January 8, 2021
A significant source of innovative ideas, particularly in technology-related fields, comes from university settings: students, faculty, and researchers. In the effort to advance these activities in the area of Internet of Things (IoT) technologies and applications, the Center for the Development and Application of Internet of Things Technologies (CDAIT) is issuing a call for proposals for the inaugural Student IoT Innovation Capacity Building Challenge.

The challenge seeks to stimulate rapid response innovative/exploratory research or projects in the field of IoT and associated domains. The competition is open to teams of one to three Georgia Tech students, plus an instructional/research faculty member who will work with the team. The proposed projects, papers, apps, or devices need to be completed by June 1. Teams will present their work at a CDAIT event in early summer. We especially seek proposals from the social sciences, humanities, and multidisciplinary teams and proposals that address the effects of IoT on underserved populations or people with disabilities. Projects that have a broader social impact are also welcome. We expect to provide up to $3,000 in research support (materials and supplies) to as many as eight (8) Challenge teams. The top three completed projects also will receive scholarship awards to be divided among team members as payments through the financial aid office.

Find all the details here: https://gatech.foready4.com/CompetitionSpace/#competitionDetail/1830244

7. NSF Sustainable Regional Systems Research Network (SRS RN) Solicitation
Deadline: January 11, 2021

The National Science Foundation (NSF) has released a new cross-agency solicitation for Sustainable Regional Systems Research Networks (SRS RNs) to advance convergent science, engineering, and education research to create more sustainable regional systems. The Research Networks will seek understanding of the sustainable connections between rural and urban communities, natural and built environments as well as the social systems that work through them. Information generated by SRS RNs will help to inform decision making for sustainable improvements of regional systems including environmental and social equity issues. SRS RNs may study a single urban or metropolitan system and its connected rural regions, multiple urban-rural systems, or an aggregation of connected urban-rural systems. The solicitation has two tracks:

- SRS RNs Full Scale Awards (Track 1) will fund up to $15 million over five years for fundamental convergent research, education, and outreach.
- SRS RNs Planning Grants (Track 2) will fund up to $150,000 for one year for the preparation of a future SRS RN Full Scale project.

Eligibility: Institutions of higher education, non-profits, and for-profit organizations are eligible to apply. There are no limits on the number of proposals that may be submitted per institution.
Total Funding and Award Size: NSF anticipates a total of $31 million in funding for this round of the program, supporting three Full Scale Awards (Track 1) and 12-20 Planning Grants (Track 2).

The full solicitation is available at: https://www.nsf.gov/pubs/2020/nsf20611/nsf20611.htm

8. DOE Announces $33 Million to Advance Hydrogen and Fuel Cell R&D and the H2@Scale
Deadline - Concept Papers: January 15, 2021, Full Applications: March 8, 2021

The Today, the U.S. Department of Energy (DOE) announced $33 million in funding to support innovative hydrogen and fuel cell research & development (R&D), infrastructure supply chain development and validation, and cost analysis activities. This funding opportunity announcement (FOA) builds upon existing efforts funded by DOE’s Hydrogen and Fuel Cell Technologies Office to reduce cost, improve performance, and strengthen a domestic supply chain for hydrogen and fuel cell technologies and applications.

Activities that result from this FOA will support the Office of Energy Efficiency and Renewable Energy’s (EERE’s) H2@Scale vision and leverage capabilities at DOE National Labs through close collaboration with the Million Mile Fuel Cell Truck (M2FCT) and H2NEW consortia. FOA topics include R&D in:

- Fuel cells for heavy-duty trucks in coordination with the M2FCT consortium
- Hydrogen production through high-temperature (high-T) water splitting (electrolysis) in coordination with the H2NEW consortium, as well as biological processes that use waste
- Domestic manufacturing of high-T electrolyzers and related components.

Additional topics include infrastructure R&D to validate hydrogen refueling models, and to develop supply chain
components to enable high throughput fueling for hydrogen stations that serve heavy-duty applications. The FOA also seeks projects conducting independent cost analyses of hydrogen production, storage, and fuel cell technologies.

The full solicitation is available at: https://epicweb.ee.doe.gov/EPICWeb/#/public/submission/opportunityDetail/2313

9. **New NSF ERC Planning Grant Proposal**
   **Deadline - Pre-Applications: January 19, 2021 at 5 PM**
The U.S. Department of Energy (DOE) announced a plan to provide up to $9 million for research on re-engineering microbes both for the production of advanced biofuels and other bioproducts and for the upcycling of polymers to reduce the environmental impact of discarded plastics.

An aim of the biofuels research is to develop methods to cost-effectively convert plant biomass directly into advanced, energy-dense transportation fuels such as gasoline, diesel, and aviation fuel. The goal of the polymer upcycling effort, meanwhile, is to develop microbial approaches to converting discarded plastics into fuels, industrial chemicals, and other high-value products as a way of ultimately reducing the environmental impact of plastic waste.


10. **DOE Announces $32 Million for Research for Advanced Computational Research in the Sciences**
    **Deadline - Pre-Applications: January 19, 2021 at 5 PM**
The U.S. Department of Energy (DOE) announced a plan to provide up to $32 million to harness DOE supercomputers for advanced research in a wide range of scientific fields, including materials science, condensed matter physics, chemical sciences, geosciences, and energy-related biosciences. The effort is part of a joint program that brings together experts in key areas of science and energy research with experts in software development, applied mathematics, and computer science to take maximum advantage of high-performance computing resources at the DOE national laboratories.

Under the Scientific Discovery through Advanced Computing (SciDAC) program, national laboratories, universities, and industry will be eligible to apply and selected by peer review. Institutions will be encouraged to come together to form integrated multi-institutional, multidisciplinary teams to tackle challenging scientific questions, with emphasis on quantum phenomena and chemical reactions relevant to energy. These teams will partner, in turn, with either or both of two SciDAC Institutes, led respectively by Lawrence Berkeley and Argonne National Laboratories, comprising leading experts in software development, applied mathematics, and computer science.

Projects are expected to take full advantage of emerging exascale computing capabilities at Argonne and Oak Ridge National Laboratories along with the advanced computing capabilities at Lawrence Berkeley National Laboratory. Planned funding is expected to total up to $32 million for projects lasting four years in duration beginning in Fiscal Year 2021. Funding is contingent on congressional appropriations.


11. **DOE Announces $9 Million for Research on Advanced Biofuels, Polymer Upcycling**
    **Deadline - Pre-Applications: January 19, 2021 at 5 PM Eastern**
The U.S. Department of Energy (DOE) announced a plan to provide up to $9 million for research on re-engineering microbes both for the production of advanced biofuels and other bioproducts and for the upcycling of polymers to reduce the environmental impact of discarded plastics.

An aim of the biofuels research is to develop methods to cost-effectively convert plant biomass directly into advanced, energy-dense transportation fuels such as gasoline, diesel, and aviation fuel. The goal of the polymer upcycling effort, meanwhile, is to develop microbial approaches to converting discarded plastics into fuels, industrial chemicals, and other high-value products as a way of ultimately reducing the environmental impact of plastic waste.


12. **DOE Announces $35 Million for Bioenergy Research and Development**
    **Deadlines - Concept Papers: February 1, 2021, Full Applications: April 5, 2021**
The U.S. Department of Energy (DOE) announced up to $35 million in funding for bioenergy feedstock technologies and algae research and development. This funding opportunity announcement (FOA) supports the White House
priority for advancing the domestic bioeconomy, as well as the Bioenergy Technologies Office’s goals of improving the performance and lowering the cost and risk of technologies that can be used to produce biofuels, biopower, and bioproducts.

Topic Areas include:

- Characterization of Municipal Solid Waste (MSW) to Enable Production of Conversion-Ready Feedstocks (up to $15M)
- Algae Productivity Exceeding Expectations (APEX) (up to $20M)

The Feedstock Technologies Topic Area will focus on the characterization of MSW streams. Projects will work on understanding MSW variability and informing the steps necessary to produce conversion-ready feedstock. The Advanced Algal Systems Topic Area looks to improve seasonal productivity of algae via a diverse portfolio of strains and improvement approaches. Projects will develop tools to accelerate current and future strain and cultivation improvements.

Find the solicitation here: https://epicweb.ee.doe.gov/EPICWeb/#/public/submission/opportunityDetail/2330

13. **New NSF ERC Planning Grant Proposal**

**Deadlines** - Concept Papers: February 5, 2021, Full Applications: April 7, 2021

The U.S. Department of Energy (DOE) announced up to $60 million in new and innovative advanced vehicle technologies research. This funding supports research that will lead to more affordable, efficient, and secure transportation energy. Funded through the Office of Energy Efficiency and Renewable Energy, this funding opportunity supports priorities in the following topic areas:

- Batteries and Electrification (Up to $35 million)
- Advanced Combustion Engines and Fuels (Up to $5 million)
- Materials Technology (Up to $11.5 million)
- New Mobility Systems (Up to $17.5 million)
- Transportation and Energy Analysis (Up to $1.2 million)

Some of these topics also support DOE’s Energy Storage Grand Challenge, which draws on the extensive research capabilities of the DOE National Laboratories as well as universities and industry to accelerate the development of energy-storage technologies and sustain American global leadership in the energy storage technologies of the future.

Find the solicitation here: https://epicweb.ee.doe.gov/EPICWeb/#/public/submission/opportunityDetail/2311

14. **New NSF ERC Planning Grant Proposal**

**Deadline:** February 21, 2021

A new solicitation for ERC planning grant proposals has recently been released. The planning grant program is designed to foster and facilitate the engineering community’s thinking about how to form convergent research collaborations. However, to participate in a forthcoming ERC competition, one is not required to submit a planning grant proposal nor to receive a planning grant.


15. **DOE Funding Opportunity Announcement - "Open Call"**

**Deadline:** Open until replaced by next fiscal year’s call, Sept. 30, 2021

The DOE Funding Opportunity Announcement (FOA), informally known as the “Open Solicitation” or “Open Call,” is issued annually at the beginning of each Fiscal Year (FY). It provides a vehicle for the Office of Science to solicit applications for research support in areas not covered by more specific, topical FOAs that are issued by the office over the course of the Fiscal Year. DOE anticipates awarding approximately $250 million for new, renewal, and supplemental grants, cooperative agreements, and inter-agency agreements under this FOA in Fiscal Year 2021, subject to the availability of FY 2021 appropriated funds.

Proposed research must fall within the programmatic priorities of DOE’s Office of Science and its major program offices, including Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, Isotope R&D and Production, and
Accelerator R&D and Production.

Funding will be competitively awarded on the basis of peer review. The FOA remains open throughout the Fiscal Year.

The FOA, titled “FY 2021 Continuation of Solicitation for the Office of Science Financial Assistance Program,” can be found on the Office of Science funding opportunities page: https://science.osti.gov/Funding-Opportunities

16. **DOE Funding Opportunity Announcement - "Open Call"**
   **Deadline: Open until replaced by next fiscal year’s call, Sept. 30, 2021**
   The DOE Funding Opportunity Announcement (FOA), informally known as the “Open Solicitation” or “Open Call,” is issued annually at the beginning of each Fiscal Year (FY). It provides a vehicle for the Office of Science to solicit applications for research support in areas not covered by more specific, topical FOAs that are issued by the office over the course of the Fiscal Year. DOE anticipates awarding approximately $250 million for new, renewal, and supplemental grants, cooperative agreements, and inter-agency agreements under this FOA in Fiscal Year 2021, subject to the availability of FY 2021 appropriated funds.

   Proposed research must fall within the programmatic priorities of DOE’s Office of Science and its major program offices, including Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, Isotope R&D and Production, and Accelerator R&D and Production.

   Funding will be competitively awarded on the basis of peer review. The FOA remains open throughout the Fiscal Year.

   The FOA, titled “FY 2021 Continuation of Solicitation for the Office of Science Financial Assistance Program,” can be found on the Office of Science funding opportunities page: https://science.osti.gov/Funding-Opportunities

17. **DOE to Provide $14.6 Million for New Atmospheric Studies**
   **Deadline: Pending Congressional Appropriations**
   The U.S. Department of Energy (DOE) announced a plan to provide $14.6 million for new studies of atmospheric processes aimed at improving the accuracy of today’s Earth system models. Studies are expected to rely on data gathered by the Atmospheric Radiation Measurement (ARM) user facility, a DOE Office of Science user facility and the world’s leading facility for ground- and air-based observation of atmospheric processes. Research will focus on interactions between clouds and aerosols (tiny particles that contribute to cloud formation), atmospheric processes in the Arctic, and studies of the warm boundary layer, or the layer of atmosphere closest to ground-level, among other topics. The Department anticipates that $14.6 million will be available for this program in Fiscal Year 2021, pending congressional appropriations. Funding is to be awarded competitively, on the basis of peer review, and is expected to be in the form of three-year grants with total award amounts ranging from $200,000 to $850,000, beginning in the current fiscal year.

   More information: https://www.energy.gov/science/articles/doe-provide-146-million-new-atmospheric-studies

18. **COVID-19 Research at the Spallation Neutron Source and High Flux Isotope Reactor**
   **Deadline: Ongoing – Resource available for research until further notice.**
   With the continuing spread of the COVID-19 pandemic, the Department of Energy Basic Energy Sciences neutron sources will provide remote rapid access to support research into the COVID-19 virus and the search for effective diagnostics and therapies. Researchers who would like to use neutron scattering resources for COVID-19 research may submit a rapid access proposal here.

19. **COVID-19 Research Questions**
   **Deadline: Ongoing – Open until further notice.**
   The Department of Energy (DOE) is taking steps to address COVID-19 and is soliciting ideas about how the Department and the National Laboratories might contribute resources for science and technology efforts and collaborations. The Department is encouraging the scientific community and others to consider research questions that underpin COVID-19 response and is requesting input on strategic, priority research directions that may be undertaken using DOE user facilities, computational resources, and enabling infrastructure. More information is available here.

20. **Solar Energy Innovators Program Opportunity**
The purpose of the Solar Energy Innovators Program is to enable selected applicants to conduct practical research on innovative solutions to the challenges faced by electric utilities, energy service providers, and electric public utility commissions as the levels of solar energy, as well as other distributed energy resources (DERs), increase on the electrical grid.

Selected applicants will participate for up to two years at a Host Institution on one or more topics related to the integration of solar energy. The applicant must identify a Host Institution and potential mentor at a utility, energy service provider, or public utilities commission (PUC) currently conducting research in an area related to the integration of solar energy onto the electricity grid. Host Institutions may seek potential Innovators that are eligible to apply to the program, but it is the potential Innovator, not the Host Institution or mentor, who submits the application and supporting materials to this site.

For more information, and to apply, click here.

21. **Events Sponsorship Program: Grants up to $4,000 Available to ORAU Consortium Member Universities**
   **Deadline:** Ongoing
   Applications for events occurring between October 1 and March 31 must be received by September 1. Applications for events occurring between April 1 and September 30 must be received by March 1.
   Event or conference sponsorship is often beneficial to our Council of Sponsoring Institution Members, whether as a means of fostering collaboration among Council members, gaining new and important information for a proposal or business plan, and more. To help make these event opportunities possible, ORAU’s University Partnerships Office offers an Events Sponsorship Program to member institutions. Each member university is limited to one award per fiscal year (October through September). Up to $4,000 may be requested to support an event that involves participants from more than one ORAU member institution, including students. Examples of such events include visits to an ORAU consortium member by a renowned speaker, conferences or workshops with a focused theme, or a technology transfer/business plan competition. For more information, please go here.

22. **Funding Opportunity: USMA Releases BAA on Research Topics Related to Army Technologies**
   **Deadline:** Continuously open through March 31, 2022
   The U.S. Military Academy (USMA) released a broad agency announcement (BAA) seeking research proposals than can enable new and significant improvements to Army capabilities and technologies. White papers are expected to focus on basic knowledge and understanding of research topics rather than specific devices or components. The BAA includes topics of interest to the USMA departments, directorate, and research centers and institutes. White papers are encouraged to address the following research topics identified by USMA as they relate to Army technologies and operational capabilities: Socio-Cultural; Information Technology; Ballistics, Weapons, and Protections; Energy and Sustainability; Materials, Measurements, and Facilities; Unmanned Systems and Space; Human Support Systems; and Artificial Intelligence, Machine Learning, and Quantum Technologies. For more information, please go here.

23. **Energy Department Announces Notice of Intent to Issue Funding to Enhance Manufacturing Competitiveness through Innovation**
   **Deadline:** TBD
   The U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) announced its intent to issue, on behalf of the Advanced Manufacturing Office (AMO), a funding opportunity to stimulate technology innovation, improve the energy productivity of American manufacturing, and enable the manufacturing of cutting-edge products in the United States. The potential Funding Opportunity Announcement (FOA), entitled “FY20 Advanced Manufacturing Multi-topic FOA,” is intended to fund high-impact, applied research and development projects that integrate specified research opportunities across AMO. For more information, please go here.

24. **ADL Ventures and National Renewable Energy Lab Competition**
   **Deadline:** Ongoing
   ADL Ventures is working with the National Renewable Energy Lab (NREL) as a Power Connector for the American-Made Solar Prize, a $3 million prize competition for researchers, innovators and entrepreneurs working on solar technologies. Winners of the competition can receive up to $500K in non-dilutive funding in addition to in-kind support from the National Labs. To date, 60 winners from 23 different states have been selected over 3 rounds for a total of $9M in funding. In addition to the publicity and resources associated with selection by DOE / NREL, the winners benefit from a much more streamlined funding process versus traditional collaborative awards and grants, allowing them to hit the ground running quickly, with minimal restrictions. More information about the price can be found on our ProblemSpace platform or from the NREL Solar Prize information webinar on August 19th. For more information, please go here.