GRANT OPPORTUNITIES
Gupta College of Science

General (All Departments)

NSF INCLUDES Planning Grants
National Science Foundation
Due Date: 12/03/2019
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320243

In 2016, the National Science Foundation (NSF) unveiled a set of “Big Ideas,” 10 bold, long-term research and process ideas that identify areas for future investment at the frontiers of science and engineering (see https://www.nsf.gov/news/special_reports/big_ideas/index.jsp). The Big Ideas represent unique opportunities to position our Nation at the cutting edge of global science and engineering leadership by bringing together diverse disciplinary perspectives to support convergence research. As such, when responding to this solicitation, even though proposals must be submitted to the Education and Human Resources (EHR) Directorate/Division of Human Resource Development (HRD), once received, the proposals will be managed by a cross-disciplinary team of NSF Program Directors. Through this solicitation, NSF Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES) will support Planning Grants to build capacity for the development of collaborative infrastructure to: (a) facilitate innovative partnerships, networks, and theories of action for broadening participation in science, technology, engineering, and mathematics (STEM) at scale and (b) lead to the establishment of future centers, alliances, or other large-scale networks to address a broadening participation challenge. While this solicitation is open to all, NSF INCLUDES Design and Development Launch Pilots are especially encouraged to apply, as a Planning Grant could serve as an intermediate conduit for bringing their exploratory pilot work to scale. A hallmark of NSF INCLUDES is to support the development of collaborative infrastructure to achieve systemic change. Collaborative infrastructure refers to the process by which partnering organizations come together with a shared vision; map out mutually reinforcing activities; develop goals, objectives, and measures to chart their progress; engage in constant communication; and advance the potential for expansion, sustainability, and scaling that would not be possible otherwise. NSF INCLUDES, one of the 10 Big Ideas, is a comprehensive national initiative to enhance U.S. leadership in STEM discoveries and innovations focused on NSF’s commitment to diversity, inclusion, and broadening participation in these fields. The vision of NSF INCLUDES is to catalyze the STEM enterprise to work collaboratively for inclusive change, resulting in a STEM workforce that reflects the population of the Nation. NSF INCLUDES features a National Network composed of Design and Development Launch Pilots, Alliances, a Coordination Hub, NSF-funded broadening participation projects, other relevant NSF-funded projects, and other organizations that support the development of talent from all sectors of society to build an inclusive STEM workforce.

Use of the NASA Physical Sciences Informatics System
National Aeronautics and Space Administration – NASA Headquarters
Due Date: 12/16/2019
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320107

The PSI system (http://psi.nasa.gov) is an online, publicly accessible database of completed physical science reduced-gravity flight experiments conducted on the ISS, on Space Shuttle flights, on Free Flyers, or on commercial cargo flights to and from the ISS, and related ground-based studies. It is a tool designed for researchers to data mine information from reduced-gravity physical sciences experiments and use it to further science in accordance with the open science approach, while also meeting the requirements of the nation’s Open Data Policy. This NRA solicits ground-based research proposals that present a compelling case on how the experimental data from the PSI system will be used to promote the advancement of further research. Proposers must show a clear path from the scientific data obtained from the PSI system to the proposed investigation. In addition, the project must address an important problem in the proposed area of research and advance scientific knowledge or technology.
Explosives Ordnance Disposal (EOD) FY20 Science & Technology Program BAA
Department of Defense – Office of Naval Research
Due Date: 12/20/2019
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320366
Development of Advanced Technologies for Diagnostic Sensors and Neutralization of Buried & Surface Munitions in Land Environments

Environmental Education Local Grants Program for Region 4 – Solicitation Notice for 2020
Environmental Protection Agency
Due Date: 01/06/2020
https://www.grants.gov/view-opportunity.html?oppId=321844
The purpose of the Environmental Education Local Grants Program in Region 4 is to support locally-focused environmental education projects that increase public awareness and knowledge about environmental and conservation issues and provide the skills that participants in its funded projects need to make informed decisions and take responsible actions toward the environment.

AmeriCorps State and National Grants FY 2020
Corporation for National and Community Service
Due Date: 01/08/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320557
AmeriCorps grants are awarded to eligible organizations proposing to engage AmeriCorps members in evidence-based or evidence-informed interventions to strengthen communities. An AmeriCorps member is an individual who engages in community service through an approved national service position. Members may receive a living allowance and other benefits while serving. Upon successful completion of their service, members earn a Segal AmeriCorps Education Award from the National Service Trust that members can use to pay for higher education expenses or apply to qualified student loans.

EPSCoR Research Infrastructure Improvement Program: Track-2 Focused EPSCoR Collaborations (RII Track-2 FEC)
National Science Foundation
Due Date: 01/24/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321614
The Established Program to Stimulate Competitive Research (EPSCoR) is designed to fulfill the mandate of the National Science Foundation (NSF) to promote scientific progress nationwide. A jurisdiction is eligible to participate in EPSCoR programs if its level of NSF research support is equal to or less than 0.75 percent of the total NSF research and related activities budget for the most recent three-year period. Through this program, NSF establishes partnerships with government, higher education, and industry that are designed to effect sustainable improvements in a jurisdiction's research infrastructure, Research and Development (R&D) capacity, and hence, its R&D competitiveness. RII Track-2 FEC builds interjurisdictional collaborative teams of EPSCoR investigators in scientific focus areas consistent with NSF priorities. Projects are investigator-driven and must include researchers from at least two RII-eligible jurisdictions with complementary expertise and resources necessary to tackle those projects, which neither party could address as well or rapidly alone. The Science, Technology, Engineering, and Mathematics (STEM) research and education activities should seek to broaden participation through the strategic inclusion and integration of different types of individuals, institutions, and sectors throughout the project. Proposals must describe a comprehensive and integrated vision to drive discovery and build sustainable STEM capacity that exemplifies diversity of all types (individual, institutional, geographic, and disciplinary). The development of diverse early-career faculty is a critical component of this sustainable STEM capacity. For FY 2020, RII Track-2 FEC proposals are invited on a single topic: "Harnessing the Data Revolution to solve problems of national importance."
Artificial Intelligence (AI) has advanced tremendously and today promises personalized healthcare; enhanced national security; improved transportation; and more effective education, to name just a few benefits. Increased computing power, the availability of large datasets and streaming data, and algorithmic advances in machine learning (ML) have made it possible for AI development to create new sectors of the economy and revitalize industries. Continued advancement, enabled by sustained federal investment and channeled toward issues of national importance, holds the potential for further economic impact and quality-of-life improvements. The 2019 update to the National Artificial Intelligence Research and Development Strategic Plan, informed by visioning activities in the scientific community as well as interaction with the public, identifies as its first strategic objective the need to make long-term investments in AI research in areas with the potential for long-term payoffs in AI. This program, a joint effort of the National Science Foundation (NSF), U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA), U.S. Department of Homeland Security (DHS) Science & Technology Directorate (S&T), U.S. Department of Transportation (DOT) Federal Highway Administration (FHWA), and U.S. Department of Veterans Affairs (VA), seeks to enable such research through AI Research Institutes. This program solicitation describes two tracks: Planning and Institute tracks. Submissions to the Planning track are encouraged in any areas of foundational and use-inspired research appropriate to NSF and its partner organizations. Proposals for the Institute track must have a principal focus in one or more of the following themes, detailed in the Program Description under "Institute Track": Trustworthy AI; Foundations of Machine Learning; AI-Augmented Learning; AI for Accelerating Molecular Synthesis and Manufacturing; and AI for Discovery in Physics.

Science and Technology Studies
National Science Foundation
Due Date: 02/03/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320857
The Science and Technology Studies (STS) program supports research that uses historical, philosophical, and social scientific methods to investigate the intellectual, material, and social facets of the scientific, technological, engineering and mathematical (STEM) disciplines. It encompasses a broad spectrum of topics including interdisciplinary studies of ethics, equity, governance, and policy issues that are closely related to STEM disciplines.

Science of Science: Discovery, Communication, and Impact
National Science Foundation
Due Date: 02/10/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320836
The Science of Science: Discovery, Communication, and Impact (SoS:DCI) program is designed to increase the public value of scientific activity. The program pursues this goal by supporting basic research in three fundamental areas: How to increase the rate of socially beneficial discovery; how to improve science communication outcomes; and how to expand the societal benefits of scientific activity. The SoS:DCI program, which builds upon the former Science of Science & Innovation Policy (SciSIP) program, funds research that builds theoretical and empirical understandings of these three areas. With this goal in mind, proposals should: Develop data, models, indicators, and associated analytical tools that constitute and enable transformative advances rather than incremental change. Identify ethical challenges and mitigate potential risks to people and institutions. Provide credible metrics and rigorous assessments of their proposed project’s impact. Include robust data management plans with the goal to increase the usability, validity, and reliability of scientific materials. The SoS:DCI program places a high priority on broadening participation. It encourages leadership from junior faculty, women, members of historically underrepresented groups, and proposals from Minority Serving Institutions (MSIs), Research Undergraduate Institutions (RUIs), and EPSCoR states. Of particular interest are proposals that have the highest potential to strengthen America’s global leadership in science and increase national competitiveness across a broad range of domains. These include proposals that analyze strategies for strengthening and diversifying the scientific workforce, as well as ways to more effectively cultivate high-impact discovery across sectors. The program strongly encourages convergent research and collaboration.
Science of Science – Doctoral Dissertation Research Improvement Grants
National Science Foundation
Due Date: 02/10/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320858
The Science of Science: Discovery, Communication, and Impact (SOS:DCI) program is designed to understand the scientific research enterprise and increase the public value of scientific activity. The program pursues this goal by supporting basic research in three fundamental areas: How to increase the rate of socially beneficial discovery; how to improve science communication outcomes; and how to expand the societal benefits of scientific activity. Doctoral Dissertation Research Improvement Grants (DDRIGs) The Doctoral Dissertation Research Improvement Grants funding opportunity is designed to improve the quality of dissertation research. DDRIG awards provide funds for items not normally available through the student's university such as enabling doctoral students to undertake significant data-gathering projects and to conduct field research in settings away from their campus. DDRIGs do not provide cost-of-living or other stipends or tuition. Outstanding DDRIG proposals specify how the knowledge to be created advances science of science.

Ethical and Responsible Research
National Science Foundation
Due Date: 02/24/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320838
Ethical and Responsible Research (ER2) funds research projects that identify (1) factors that are effective in the formation of ethical STEM researchers and (2) approaches to developing those factors in all STEM fields that NSF supports. ER2 solicits proposals for research that explores the following: 'What constitutes responsible conduct for research (RCR), and which cultural and institutional contexts promote ethical STEM research and practice and why?' Do certain labs have a 'culture of academic integrity'? What practices contribute to the establishment and maintenance of ethical cultures and how can these practices be transferred, extended to, and integrated into other research and learning settings? Factors one might consider include: honor codes, professional ethics codes and licensing requirements, an ethic of service and/or service learning, life-long learning requirements, curricula or memberships in organizations (e.g. Engineers without Borders) that stress responsible conduct for research, institutions that serve under-represented groups, institutions where academic and research integrity are cultivated at multiple levels, institutions that cultivate ethics across the curriculum, or programs that promote group work, or do not grade. Successful proposals typically have a comparative dimension, either between or within institutional settings that differ along these or among other factors, and they specify plans for developing interventions that promote the effectiveness of identified factors. ER2 research projects will use basic research to produce knowledge about what constitutes or promotes responsible or irresponsible conduct of research, and how to best instill this knowledge into researchers and educators at all career stages. In some cases, projects will include the development of interventions to ensure ethical and responsible research conduct. Proposals for awards from minority-serving institutions (e.g., Tribal Colleges and Universities, Historically Black Colleges and Universities, Hispanic-Serving Institutions, Alaska Native or Native Hawaiian Serving Institutions), women's colleges, and organizations primarily serving persons with disabilities are strongly encouraged. Proposals including international collaborations are encouraged when those efforts enhance the merit of the proposed work by incorporating unique resources, expertise, facilities or sites of international partners. If possible, the U.S. team's international counterparts should obtain funding through other sources.

Higher Education Challenge (HEC) Grants Program
Department of Agriculture – National Institute of Food and Agriculture
Due Date: 03/23/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320953
Projects supported by the Higher Education Challenge Grants Program will: (1) address a state, regional, national, or international educational need; (2) involve a creative or non-traditional approach toward addressing that need that can serve as a model to others; (3) encourage and facilitate better working relationships in the university science and education community, as well as between universities and the private sector, to enhance program quality and supplement available resources; and (4) result in benefits that will likely transcend the project duration and USDA support.
Environmental Literacy Grants: Supporting the education of K-12 students and the public for community resilience
Department of Commerce
Due Date: 03/26/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321575
The goal of this funding opportunity is to build environmental literacy of K-12 students and the public so they are knowledgeable of the ways in which their community can become more resilient to extreme weather and/or other environmental hazards, and become involved in achieving that resilience. Projects should build the collective environmental literacy necessary for communities to become more resilient to the extreme weather and other environmental hazards they face in the short- and long-term. Building sufficient environmental literacy in a community means that these communities are composed of individuals who are supported by formal and informal education that develop their knowledge, skills, and confidence to: (1) reason about the ways that human and natural systems interact globally and where they live, including the acknowledgement of disproportionately distributed vulnerabilities; (2) participate in scientific and/or civic processes; and (3) consider scientific uncertainty, cultural knowledge, and diverse community values in decision making.

Mid-Scale Innovations Program in Astronomical Sciences
National Science Foundation
Due date: 05/06/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320837
A vigorous Mid-Scale Innovations Program (MSIP) was recommended by the 2010 Astronomy and Astrophysics Decadal Survey, citing "many highly promising projects for achieving diverse and timely science." As described in this solicitation, the Division of Astronomical Sciences conducts a mid-scale program to support a variety of astronomical activities within a cost range up to $30M. This program is formally divided into four subcategories: 1) limited term, self-contained science projects; 2) longer term mid-scale facilities; 3) development investments for future mid-scale and large-scale projects; and 4) community open access capabilities. MSIP will emphasize both strong scientific merit and a well-developed plan for student training and involvement of a diverse workforce in instrumentation, facility development, or data management.

Maximizing Investigators’ Research Award
Department of Health and Human Services – National Institutes of Health
Due Date: Ongoing through 05/17/2022
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320413
The Maximizing Investigators’ Research Award (MIRA) provides support for the program of research in an investigator's laboratory that is within the mission of NIGMS. The goal of MIRA is to increase the efficiency and efficacy of NIGMS funding. It is anticipated that this program will: Increase the stability of funding for NIGMS-supported investigators, which could enhance their ability to take on ambitious scientific projects and approach problems more creatively; Increase flexibility for investigators to follow important new research directions within the NIGMS mission as opportunities arise, rather than being bound to specific aims proposed in advance of the studies; More widely distribute funding among the nation’s highly talented and promising investigators to increase overall scientific productivity and the chances for important breakthroughs; Reduce the time spent by researchers writing and reviewing grant applications, allowing them to spend more time conducting research; Enable investigators to devote more time and energy to mentoring trainees in a more stable research environment. This FOA allows both new applications from eligible NIGMS-funded investigators and renewal applications from current established and early-stage MIRA grantees.

NRL Long Range Broad Agency (BAA) for Basic and Applied Research
Department of Defense – Naval Research Laboratory
Due Date: 09/05/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320355
The NRL’s Broad Agency Announcement (BAA) issued under the provisions of paragraphs 35.016 and 6.102(d)(2) of the Federal Acquisition Regulations (FAR). Proposals may range from theoretical studies to proof-of-concept to include fabrication and delivery of a prototype. However, this is limited to research procurements for which it would be impossible to draft an adequate RFP in sufficient detail without restraining the technical response and thus hindering competition rather than expanding it. BAA topics include all NRL sites located in the Washington, DC area, the Stennis Space Center, MS, and Monterey, CA. Proposals submitted in response to a BAA announcement that are selected for award are considered to be the result of full and open competition and are in full compliance with the provisions of Public Law 98-369, "The Competition in Contracting Act of 1984."
NSF Dynamic Language Infrastructure – NEH Documenting Endangered Languages
National Science Foundation
Due Date: 09/15/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320854
This funding partnership between the National Science Foundation (NSF) and the National Endowment for the Humanities (NEH) supports projects to develop and advance knowledge concerning dynamic language infrastructure in the context of endangered human languages—languages that are both understudied and at risk of falling out of use. Made urgent by the imminent loss of roughly half of the approximately 7000 currently used languages, this effort aims to exploit advances in information technology to build computational infrastructure for endangered language research. The program supports projects that contribute to data management and archiving, and to the development of the next generation of researchers. Funding can support fieldwork and other activities relevant to the digital recording, documentation and analysis, and archiving of endangered language data, including the preparation of lexicons, grammars, text samples, and databases. Funding will be available in the form of one- to three-year senior research grants, fellowships from six to twelve months, and conference proposals.

Long Range Broad Agency Announcement (BAA) for Navy and Marine Corps Science & Technology
Department of Defense – Office of Naval Research
Due Date: 09/30/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321039
The Office of Naval Research (ONR), ONR Global, and the Marine Corps Warfighting Lab (MCWL) are 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 ONR’s broad role in competitive funding of meritorious research across a spectrum of science and engineering disciplines.

Environmental Engineering
National Science Foundation
Due Date: Ongoing
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320490
The Environmental Engineering program is part of the Environmental Engineering and Sustainability cluster, which also includes 1) the Nanoscale Interactions program; and 2) the Environmental Sustainability program. Environmental engineering is an interdisciplinary field that applies chemical, biological, and physical scientific principles to protect human and ecological health. The goal of the Environmental Engineering program is to support potentially transformative fundamental research that applies scientific and engineering principles to 1) prevent, minimize, or re-use solid, liquid, and gaseous discharges of pollution to soil, water, and air by closing resource loops or through other measures; 2) mitigate the ecological and human-health impacts of such releases by smart/adaptive/reactive amendments or manipulation of the environment, and 3) remediate polluted environments through engineered chemical, biological, and/or geo-physical processes. Integral to achieving these goals is a fundamental understanding of the transport and biogeochemical reactivity of pollutants in the environment. Therefore, research on environmental micro/biology, environmental chemistry, and environmental geophysics may be relevant providing the research has a clear objective of protecting human and ecological health.
Desalination and Water Purification Research Program: Research Projects for Fiscal Years 2020 and 2021
Department of the Interior – Bureau of Reclamation
Due Date: 12/04/2019 for FY20, additional date to be added for FY21

https://www.grants.gov/web/grants/view-opportunity.html?oppId=321236

This FOA’s objective is to invite private industry, universities, water utilities, and other research sponsors to submit applications that address DWPR program goals and objectives at the laboratory or pilot scale studies. **Funding Group I: Laboratory Scale** projects are typically bench scale studies involving small flow rates (less than 2 gallons per minute). They are used to determine the viability of a novel process, new materials, or process modifications. Research at this stage often involves a high degree of risk and uncertainty. Up to $250,000 in Federal funds per proposed project will be available under this funding group for projects that can be completed within two years.

**Funding Group II: Pilot scale** projects test a novel process at a sufficiently large scale to determine the practicality of implementing the technology at a larger scale. Pilot studies are used to generate data that can be used to estimate the operational requirements (labor, chemical addition, power requirements) of the process and to show performance with respect to finished water quality goals. Pilot scale projects are generally preceded by laboratory studies (funded previously by DWPR or others) that demonstrate that the technology works. Up to $800,000 in Federal funds per proposed project will be available under this funding group for projects that can be completed within three years. The funding will be divided by year and should be included in the proposed budget portion of the application. Funding after the first year is not guaranteed and will be made available based on adequate work completed in the previous year.

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FY20 Dr Nancy Foster Scholarship Program
Department of Commerce
Due Date: 12/06/19

https://www.grants.gov/web/grants/view-opportunity.html?oppId=321398

The Dr. Nancy Foster Scholarship Program provides support for master’s and doctoral degrees in oceanography, marine biology, or maritime archaeology—this can include but is not limited to ocean and/or coastal: engineering, social science, marine education, marine stewardship, resource management disciplines—and particularly encourages women and members of minority groups to apply. Individuals who are U.S. citizens or permanent residents, or citizens of U.S. territories, and are applying to or have been accepted to a graduate program at a U.S. accredited institution, may apply. Prospective scholars do not need to be enrolled in a graduate program at the time of application but must be admitted to a graduate level program in order to be awarded this scholarship.

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National Competitive Harmful Algal Bloom Programs
Department of Commerce
Due Date: 01/10/2020

https://www.grants.gov/web/grants/view-opportunity.html?oppId=321508

The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) is soliciting proposals for the Prevention, Control and Mitigation of Harmful Algal Blooms (PCMHAB) and HAB Socioeconomics Research Programs. Funding is contingent upon the availability of Fiscal Year 2020 Federal appropriations. It is anticipated that projects funded under this announcement will have a September 1, 2020 start date.
The Macrosystems Biology and NEON-Enabled Science (MSB-NES) program will support quantitative, interdisciplinary, systems-oriented research on biosphere processes and their complex interactions with climate, land use, and changes in species distribution at regional to continental scales as well as training activities to broaden participation of researchers in Macrosystems Biology and NEON-Enabled Science. Proposers are encouraged to use NEON resources, and proposals for substantive and innovative NEON-enabled research will be prioritized for funding. Substantive NEON-enabled projects rely on data and/or samples collected by NEON, co-locate research activities at NEON sites, and/or develop tools that will explicitly enhance the processing, use, and/or analysis of NEON data or collections within the context of Macrosystems Biology research questions.

The Division of Chemical, Bioengineering and Environmental Transport (CBET) in the Engineering Directorate of the National Science Foundation (NSF) is partnering with The Center for the Advancement of Science in Space (CASIS) to solicit research projects in the general field of fluid dynamics, particulate and multiphase processes, combustion and fire systems, thermal transport processes, and nanoscale interactions that can utilize the International Space Station (ISS) National Lab to conduct research that will benefit life on Earth. Only U.S. entities including academic investigators, non-profit independent research laboratories and academic-commercial teams are eligible to apply.

The National Sea Grant College Program was enacted by U.S. Congress in 1966 (amended in 2008, Public Law 110-394) to support federal and state partnerships that harness the intellectual capacity of the nation’s universities and research institutions to solve problems and generate opportunities in coastal communities. This notice announces that applications may be submitted for the 2021 National Sea Grant College Program Dean John A. Knauss Marine Policy Fellowship (Sea Grant Knauss Fellowship Program). The National Sea Grant College Program (Sea Grant) anticipates funding not less than 35 applicants, of which those assigned to the Legislative branch will be approximately 14. Application packages will each propose a total of $74,000 in funding. This includes base funding for each award at $59,000 with optional host office travel up to an additional $15,000. If additional office-related travel funds beyond $15,000 are required, those funds will be administered through an amendment to the grant.

The National Sea Grant College Program was enacted by U.S. Congress in 1966 (amended in 2008, Public Law 110-394) to support leveraged federal and state partnership that harness the intellectual capacity of the nation’s universities and research institutions to solve problems and generate opportunities in coastal communities. This notice is to request proposals for special projects consistent with the focus areas outlined in the National Sea Grant College Program’s (Sea Grant) strategic plan, and to provide the general public with information and guidelines on how Sea Grant will select proposals and administer Federal assistance under this announcement. This announcement is a mechanism to encourage research or other projects that are not normally funded through Sea Grant national competitions. This opportunity is open only to Sea Grant programs.
2020 National Fish Passage Program
Department of the Interior – Fish and Wildlife Service
Due Date: Continuous through 09/30/2020
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321478
The National Fish Passage Program (NFPP) is a voluntary program that provides direct technical and financial assistance to partners. The program works in partnership to provide fish (and other aquatic organisms) passage and restore aquatic connectivity for the benefit of federal trust resources. In doing so, the program aims to maintain or increase fish populations in order to improve ecosystem resiliency and to provide quality fishing experiences for the American people. Activities that restore fish passage also support the modernization of country’s infrastructure such as road culverts, bridges and water diversions. Example project types include dam removals, culvert replacements, and the installation of fishways. The NFPP is delivered through 51 Fisheries and Aquatic Conservation (FAC) Field Offices across all States and territories. FAC staff coordinate with project partners, stakeholders and other Service programs to identify and collaboratively implement projects within Regional priority areas. Project work plans are developed strategically, in coordination with partners, and with substantial involvement from FAC staff. Projects must advance the Service mission, promote biological diversity, and be based upon sound scientific biological principles. FAC and Service strategic plans inform the types of projects funded under this opportunity. Applicants seeking funding under this program should review the program strategic plan and also contact the regional NFPP Coordinator that corresponds to the location of the project for additional regional priorities prior to submitting an application for funding.

2020 National Fish Habitat Action Plan
Department of the Interior – Fish and Wildlife Service
Due Date: Contact local FHP to determine submittal deadline.
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321454
The Fish and Wildlife Management Assistance Program provides technical and financial assistance to other federal agencies, states, local governments, Native American tribes, non-governmental organizations, citizen groups, and landowners for the conservation and management of fish and wildlife resources. This includes minimizing the establishment, spread, and impact of aquatic invasive species. Specifically, aquatic habitat conservation projects under this program must protect, restore, and enhance fish and aquatic habitats, as outlined in the National Fish Habitat Action Plan (Action Plan). Likewise, projects under this program, directly or indirectly, support and promote public access to recreational fishing opportunities and the sustainable use of other natural resources. Funded projects may be carried out by Fish Habitat Partnerships (FHPs) recognized by the National Fish Habitat Board (Board) or the partners of Board recognized FHPs. More information about the FHPs and their partners can be found online at www.fishhabitat.org.

Fluid Dynamics
National Science Foundation
Due Date: Ongoing
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320491
The Fluid Dynamics program is part of the Transport Phenomena cluster, which also includes 1) the Combustion and Fire Systems program; 2) the Particulate and Multiphase Processes program; and 3) the Thermal Transport Processes program. The Fluid Dynamics program supports fundamental research toward gaining an understanding of the physics of various fluid dynamics phenomena. Proposed research should contribute to basic scientific understanding via experiments, theoretical developments, and computational discovery. Major areas of interest and activity in the program include: Turbulence and transition: High Reynolds number experiments; large eddy simulation; direct numerical simulation; transition to turbulence; 3-D boundary layers; separated flows; multi-phase turbulent flows; flow control and drag reduction. A new area of emphasis is high speed boundary layer transition and turbulence; the focus would be for flows at Mach numbers greater than 5 to understand cross-mode interactions leading to boundary layer transition and the ensuing developing and fully developed turbulent boundary layer flows. Combined experiments and simulations are encouraged. Bio-fluid physics: Bio-inspired flows; biological flows with emphasis on flow physics. Non-Newtonian fluid mechanics: Viscoelastic flows; solutions of macro-molecules. Microfluidics and nanofluidics: Micro-and nano-scale flow physics. Wind and ocean energy harvesting: Focused on fundamental fluid dynamics associated with renewable energy. Fluid-structure interactions: This is an NSF-AFOSR (Air Force Office of Scientific Research) joint funding area focused on theory, modeling and/or experiments for hypersonics applications. A small number of awards (depending on availability of funds and proposal quality) will be provided and will be jointly reviewed by NSF and AFOSR using the NSF panel format. Actual funding format and agency split for an award will be determined after the proposal selection process. The AFOSR program that participates in this initiative is the Program on High Speed Aerodynamics.
Environmental Sustainability
National Science Foundation
Due Date: Ongoing
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320494
The Environmental Sustainability program is part of the Environmental Engineering and Sustainability cluster together with 1) the Environmental Engineering program and 2) the Nanoscale Interactions program. The goal of the Environmental Sustainability program is to promote sustainable engineered systems that support human well-being and that are also compatible with sustaining natural (environmental) systems. These systems provide ecological services vital for human survival. Research efforts supported by the program typically consider long time horizons and may incorporate contributions from the social sciences and ethics. The program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions. There are four principal general research areas that are supported: Industrial ecology: Topics of interest include advancements in modeling such as life cycle assessment, materials flow analysis, input/output economic models, and novel metrics for measuring sustainable systems. Innovations in industrial ecology are encouraged. Green engineering: Research is encouraged to advance the sustainability of manufacturing processes, green buildings, and infrastructure. Many programs in the Engineering Directorate support research in environmentally benign manufacturing or chemical processes. The Environmental Sustainability program supports research that would affect more than one chemical or manufacturing process or that takes a systems or holistic approach to green engineering for infrastructure or green buildings. Improvements in distribution and collection systems that will advance smart growth strategies and ameliorate effects of growth are research areas that are supported by Environmental Sustainability. Innovations in management of storm water, recycling and reuse of drinking water, and other green engineering techniques to support sustainability may also be fruitful areas for research. Ecological engineering: Proposals should focus on the engineering aspects of restoring ecological function to natural systems. Engineering research in the enhancement of natural capital to foster sustainable development is encouraged. Earth systems engineering: Earth systems engineering considers aspects of large scale engineering research that involve mitigation of greenhouse gas emissions, adaptation to climate change, and other global concerns. All proposed research should be driven by engineering principles, and be presented explicitly in an environmental sustainability context. Proposals should include involvement in engineering research of at least one graduate student, as well as undergraduates. Incorporation of aspects of social, behavioral, and economic sciences is welcomed.

Division of Environmental Biology
National Science Foundation
Due Date: Ongoing
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321354
The Division of Environmental Biology (DEB) Core Track supports research and training on evolutionary and ecological processes acting at the level of populations, species, communities, and ecosystems. DEB encourages research that elucidates fundamental principles that identify and explain the unity and diversity of life and its interactions with the environment over space and time. Research may incorporate field, laboratory, or collection-based approaches; observational or manipulative studies; synthesis activities; phylogenetic discovery projects; or theoretical approaches involving analytical, statistical, or computational modeling. Proposals should be submitted to the core clusters (Ecosystem Sciences, Evolutionary Processes, Population and Community Ecology, and Systematics and Biodiversity Sciences). DEB also encourages interdisciplinary proposals that cross conceptual boundaries and integrate over levels of biological organization or across multiple spatial and temporal scales. Research addressing ecology and ecosystem science in the marine biome should be directed to the Biological Oceanography Program in the Division of Ocean Sciences; research addressing evolution and systematics in the marine biome should be directed to the Evolutionary Processes or Systematics and Biodiversity Science programs in DEB. All DEB programs also encourage proposals that leverage NSF-supported data networks, databases, centers, and other forms of scientific infrastructure, including but not limited to the National Ecological Observatory Network (NEON), Environmental Data Initiative (EDI), and Integrated Digitized Biocollecting (iDigBio). The Rules of Life Track supports integrative proposals that span population, species, community and ecosystem scales normally funded by DEB, to organismal, cellular and molecular scales typically funded by other divisions in the Biological Sciences. 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 environment acting over 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.
Transitions to Excellence in Molecular and Cellular Biosciences Research  
National Science Foundation  
Due Date: Ongoing  
https://www.grants.gov/web/grants/view-opportunity.html?oppId=321697

The Division of Molecular and Cellular Biosciences (MCB) has developed a new opportunity to enable researchers with a strong track record of prior accomplishment to pursue a new avenue of research or inquiry. This funding mechanism is designed to facilitate and promote a PI’s ability to effectively adopt empowering technologies that might not be readily accessible in the PI’s current research environment or collaboration network. Transformative research likely spans disciplines and minimizing the practical barriers to doing so will strengthen research programs poised to make significant contributions. The award is intended to allow mid-career or later-stage researchers (Associate or Full Professor, or equivalent) to expand or make a transition in their research programs via a sabbatical leave or similar mechanism of professional development and then develop that research program in their own lab. This award will also enable the PI to acquire new scientific or technical expertise, facilitate the investigator's competitiveness, and potentially lead to transformational impacts in molecular and cellular bioscience.

Engineering of Biomedical Systems  
National Science Foundation  
Due Date: Ongoing  
https://www.grants.gov/web/grants/view-opportunity.html?oppId=320524

The Engineering of Biomedical Systems program is part of the Engineering Biology and Health cluster, which also includes: 1) the Biophotonics program; 2) the Biosensing program; 3) the Cellular and Biochemical Engineering program; and 4) the Disability and Rehabilitation Engineering program. The goal of the Engineering of Biomedical Systems (EBMS) program is to provide opportunities for creating fundamental and transformative research projects that integrate engineering and life sciences to solve biomedical problems and serve humanity in the long term. Projects are expected to use an engineering framework (for example, design or modeling) that supports increased understanding of physiological or pathophysiological processes. Projects must include objectives that advance both engineering and biomedical sciences. Projects may include: methods, models, and enabling tools applied to understand or control living systems; fundamental improvements in deriving information from cells, tissues, organs, and organ systems; or new approaches to the design of systems that include both living and non-living components for eventual medical use in the long term.