

Grants Opportunities: Science & Tech (42)

April-June 2014

Plant Genome Research Program

Granting Agency: National Science Foundation

Current Closing Date for Applications: 04/28/14

Expected Number of Awards: 15

Eligibility: U.S. academic institutions; U.S. non-profit research organizations; museums; research laboratories; professional societies; similar organizations in the U.S. that are directly associated with educational or research activities

Estimated Total Program Funding: \$15,000,000

CFDA Number: 47.074

Funding Opportunity Number: 14-533

This program is a continuation of the Plant Genome Research Program (PGRP) that began in FY 1998 as part of the National Plant Genome Initiative (NPGI). Since the inception of the NPGI and the PGRP, there has been a tremendous increase in the availability of functional genomics tools and sequence resources for use in the study of key crop plants and their models. Proposals are welcomed that build on these resources to develop conceptually new and different ideas and strategies to address grand challenge questions in plants of economic importance on a genome-wide scale. There is also a critical need for the development of novel and creative tools to facilitate new experimental approaches or new ways of analyzing genomic data. Especially encouraged are proposals that provide strong and novel training opportunities integral to the research plan and particularly across disciplines that include, but are not limited to, plant physiology, quantitative genetics, biochemistry, bioinformatics and engineering. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14533

NOAA Sea Grant Aquaculture Research Program 2014

Granting Agency: Department of Commerce

Current Closing Date for Applications: 05/05/14

Eligibility: Institutions of higher education; nonprofit organizations; commercial organizations;

Estimated Total Program Funding: \$3,000,000

CFDA Number: 11.417

Funding Opportunity Number: NOAA-OAR-SG-2014-2003987

Depending on the availability of funds, NOAA Sea Grant expects to have up to \$3,000,000 available for a national competition to fund new FY 2014 marine aquaculture research projects. This is part of the overall plan to support the development of environmentally and economically sustainable ocean, coastal, or Great Lakes aquaculture. Topical priorities for this FY 2014 competition are, briefly: 1) Research to inform pending, regulatory decisions on the local, state,

or federal level leading to an information product-- such as a tool, technology, template, or model-- needed to make final decisions on a specific question regarding impacts of aquaculture; 2) Public-private research partnerships that address specific, current problems that limit a steady supply of marine or Great Lakes fingerlings; and 3) Social and/or economic research targeted to understand aquaculture issues in a larger context. Applicants must describe how their proposed work will rapidly and significantly advance U.S. marine aquaculture development in the short-term (1-2 years after project completion). This Federal Funding Opportunity includes information on application and criteria for aquaculture research proposals requesting a maximum of \$500,000 in total federal funding for up to a two-year period. Matching funds are required. Awards are anticipated to start no later than September 1, 2014. Additional proposals from this competition may be selected for funding in the next fiscal year, subject to the availability of funds.

Experimental Program to Stimulate Competitive Research (EPSCoR): Workshop Opportunities

Granting Agency: National Science Foundation

Expected Number of Awards: 5

Eligibility: Proposals may only be submitted by the following: - All jurisdictions that currently participate in EPSCoR are eligible to submit workshop proposals. Non-EPSCoR institutions and individuals may participate in the collaborative workshop activities, but they cannot lead the workshop proposal effort, nor can they be recipients of NSF EPSCoR funds. Jurisdictions that are newly eligible for EPSCoR funding must have received a planning grant before submitting proposals to any of the EPSCoR programs.

Estimated Total Program Funding: \$500,000

CFDA Number: 47.041; 46.049; 47.050; 47.070; 47.074; 47.076; 47.078; 47.079; 47.080; 47.081

Funding Opportunity Number: 12-588

The Experimental Program to Stimulate Competitive Research (EPSCoR) is designed to fulfill the mandate of the National Science Foundation (NSF) to promote scientific progress nationwide. The EPSCoR program is directed at those jurisdictions that have historically received lesser amounts of NSF Research and Development (R&D) funding. Thirty jurisdictions, including twenty-eight states, the Commonwealth of Puerto Rico, and the U. S. Virgin Islands, currently participate in EPSCoR. 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, R& D capacity, and hence, its national R& D competitiveness. The EPSCoR Office welcomes unsolicited proposals from EPSCoR jurisdictions for workshops involving the EPSCoR community. These workshops will focus on innovative ways to address multi-jurisdictional efforts on themes of regional to national importance with relevance to EPSCoR's goals/objectives and NSF's mission. **For more information go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12588

Grant Opportunities for Academic Liaison with Industry

Granting Agency: National Science Foundation

Expected Number of Awards: 80

Eligibility: For fellowships/traineeships, only U.S. citizens, nationals, or permanent residents are eligible to apply for support under this program. NSF funds cannot go to an industry partner; they can only be used by the academic institution. The industry partner is expected to participate in the research effort to facilitate in the commercialization of the research.

Estimated Total Program Funding: \$5,000,000

CFDA Number: 47.041; 46.049; 47.050; 47.070; 47.074; 47.076; 47.078; 47.079; 47.080; 47.081

Funding Opportunity Number: 12-513

Grant Opportunities for Academic Liaison with Industry (GOALI) promotes university-industry partnerships by making project funds or fellowships/traineeships available to support an eclectic mix of industry-university linkages. Special interest is focused on affording the opportunity for: Faculty, postdoctoral fellows, and students to conduct research and gain experience in an industrial setting; Industrial scientists and engineers to bring industry's perspective and integrative skills to academe; and Interdisciplinary university-industry teams to conduct research projects. This solicitation targets high-risk/high-gain research with a focus on fundamental research, new approaches to solving generic problems, development of innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry. GOALI seeks to fund transformative research that lies beyond that which industry would normally fund. **For more information go to:**

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12513

NSF-NIST Interaction in Basic and Applied Scientific Research in BIO ENG & MPS

Granting Agency: National Science Foundation

Expected Number of Awards: 20

Eligibility: Only principal investigators (PIs) on current NSF awards from participating divisions in the BIO, ENG or MPS Directorates are eligible to apply for supplements.

Estimated Total Program Funding: \$300,000

CFDA Number: 47.041; 473049; 47.074

Funding Opportunity Number: 11-066

This Dear Colleague Letter is intended to facilitate interactions between Principal Investigators (PIs), co-PIs, post-doctoral scholars and both undergraduate and graduate students supported by the National Science Foundation (NSF) and scientists and engineers at the National Institute of Standards and Technology's (NIST). NIST operates a vast array of instruments and measurement systems, both commercial equipment and specialized tools developed by NIST researchers. Researchers from industry, academia, and non-profit organizations interested in working collaboratively with NIST researchers on projects of mutual interest may access these systems as part of that research. Supplemental support to existing NSF awards may be requested to allow

PIs, co-PIs, post-doctoral scholars and both undergraduate and graduate students on these awards to participate in such collaborative research at NIST.projects. This solicitation targets high-risk/high-gain research with a focus on fundamental research, new approaches to solving generic problems, development of innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry. GOALI seeks to fund transformative research that lies beyond that which industry would normally fund. **For more information go to:** www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11066

Earth Sciences: Instrumentation and Facilities

Granting Agency: National Science Foundation

Expected Number of Awards: 50

Eligibility: Unrestricted

Estimated Total Program Funding: \$7,000,000

CFDA Number: 47.050

Funding Opportunity Number: 11-544

The Instrumentation and Facilities Program in the Division of Earth Sciences (EAR/IF) supports meritorious requests for infrastructure that promotes research and education in areas supported by the Division (see <http://www.nsf.gov/div/index.jsp?div=EAR>). EAR/IF will consider proposals for:1) Acquisition or Upgrade of Research Equipment that will advance laboratory and field investigations, and student research training opportunities in the Earth sciences. The maximum request is \$1,000,000. The maximum request for upgrade of research group computing facilities is \$75,000;2) Development of New Instrumentation, Analytical Techniques or Software that will extend current research and research training capabilities in the Earth sciences. The maximum request is \$1,000,000;3) Support of National or Regional Multi-User Facilities that will make complex and expensive instruments or systems of instruments broadly available to the Earth sciences research and student communities;4) Support for Early Career Investigators to facilitate expedient operation of new research infrastructure proposed by the next generation of leaders in the Earth Sciences. This opportunity allows for submission of a proposal for Acquisition or Upgrade of Research Equipment that includes budget line items associated with support of a new full-time technician who will be dedicated to manage the instrument(s) being requested. Any request for technical support under this opportunity is limited to three years duration. The maximum request is \$1,000,000.Planned research uses of requested instruments, software, and facilities must include basic research on Earth processes SUPPORTED BY THE DIVISION OF EARTH SCIENCES. Support is available through grants or cooperative agreements awarded in response to investigator-initiated proposals. Human resource development and education are expected to be an integral part of all proposals submitted to EAR/IF. Efforts to support participation of underrepresented groups in laboratory and/or field instrument use and training are encouraged. All proposers to EAR/IF are invited to consider Support of Outreach and/or Broadening Participation Activities. Proposals submitted to the EAR/IF Program may request up to \$20,000 for such activities (please refer to Sections V.A Proposal Preparation Instructions and V.B Budgetary Information).Proposals requesting equipment, infrastructure or personnel that will also serve disciplines outside the Earth sciences

may be jointly reviewed with other programs within the Foundation. EAR/IF will consider co-funding of projects with other NSF programs and other agencies. **For more information go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf11544

Conferences and Workshops in the Mathematical Sciences

Granting Agency: National Science Foundation

Current Closing Date for Applications: Due date for the appropriate disciplinary program.

Expected Number of Awards: 100

Eligibility: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities. Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members.

Estimated Total Program Funding: \$4,000,000

CFDA Number: 47.049

Funding Opportunity Number: 10-578

Conferences, workshops, and related events (including seasonal schools and international travel by groups) support research and training activities of the mathematical sciences community. Proposals for conferences, workshops, or conference-like activities may request funding of any amount and for durations of up to three years. Proposals under this solicitation must be submitted to the appropriate DMS programs at the deadline specified on the program webpage. **For more information go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf10578

NSF/FDA SCHOLAR-IN-RESIDENCE AT FDA

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals must be submitted in accordance with the due date for the appropriate disciplinary program.

Expected Number of Awards: 10

Eligibility: Unrestricted

Estimated Total Program Funding: \$500,000

CFDA Number: 47.041; 47.070

Funding Opportunity Number: 10-533

The National Science Foundation (NSF), through the Directorate for Engineering's Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET), and the U.S. Food and Drug Administration (FDA), through its Center for Devices and Radiological Health (CDRH) have established the NSF/FDA Scholar-in-Residence Program at FDA. This program comprises an interagency partnership for the investigation of scientific and engineering issues concerning emerging trends in medical device technology. This partnership is designed to enable investigators in science, engineering, and mathematics to develop research collaborations within the intramural research environment at the FDA. This solicitation features four flexible

mechanisms for support of research at the FDA: 1) Faculty at FDA; 2) Graduate Student Fellowships; 3) Postdoctoral Fellowships; and, 4) Undergraduate Student Research Experiences. Undergraduate student participants supported with NSF funds must be citizens or permanent residents of the United States. **For more information go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf10533

Science of Learning Centers

Granting Agency: National Science Foundation

Current Closing Date for Applications: Full Proposal Accepted Anytime The Science of Learning Centers Program is currently only accepting proposals for Workshops, EARly-concept Grants for Exploratory Research (EAGER), Rapid Response Grants (RAPID), and Supplements to NSF awards (including those funded by other programs). PIs must contact the NSF program officer prior to submission of an EAGER or RAPID proposal.

Expected Number of Awards: 15

Eligibility: Unrestricted

Estimated Total Project Funding: \$3,000,000

CFDA Number: 47.041; 47.049; 47.050; 47.070; 47.074; 47.075; 47.076; 47.078; 47.079; 47.080; 47.081

Funding Opportunity Number: PD-07-7278

The Science of Learning Centers program (SLC) offers awards for large-scale, long-term Centers that create the intellectual, organizational and physical infrastructure needed for the long-term advancement of Science of Learning research. It supports research that harnesses and integrates knowledge across multiple disciplines to create a common groundwork of conceptualization, experimentation and explanation that anchor new lines of thinking and inquiry towards a deeper understanding of learning. The goals of the Science of Learning Centers Program are to advance the frontiers of all the sciences of learning through integrated research; to connect the research to specific scientific, technological, educational, and workforce challenges; to enable research communities to capitalize on new opportunities and discoveries; and to respond to new challenges. The Science of Learning Centers Program is currently accepting proposals for Workshops, EARly-concept Grants for Exploratory Research (EAGER), Rapid Response Grants (RAPID), and Supplements to NSF awards (including those funded by other programs). Please see the submission guidelines for these special types of grants under the RELATED URLS section of this program description and contact the SLC program officers for assistance and advice prior to proposal submission. **For more information go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5567

Developing Country Collaborations in Plant Genome Research (DCC-PGR)

Granting Agency: National Science Foundation

Current Closing Date for Applications: Supplemental requests can be submitted at any time. Please allow 4 to 6 months for review. Investigators submitting new or renewal proposals for the FY2006 PGRP and future target dates are encouraged to integrate this activity into the proposals.

Expected Number of Awards: 15

Eligibility: Unrestricted

Estimated Total Project Funding: \$3,000,000

CFDA Number: 47.074

Funding Opportunity Number: 04-563

This letter is to call your attention to a new activity that will support research collaboration between US scientists and scientists in developing countries as part of ongoing or new Plant Genome Research Program awards. The Developing Country Collaborations in Plant Genome Research (DCC-PGR) is an addendum to the NSF Program Solicitation, NSF 04-510, Plant Genome Research Program (PGRP) (<http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf04510>). The intent of DCC-PGR awards is to support collaborative research linking US researchers with partners from developing countries to solve problems of mutual interest in agriculture, energy and the environment, while placing US and international researchers at the center of a global network of scientific excellence. The long-term goal of these collaborative research efforts is a greater and sustained engagement with developing countries in plant biotechnology research. In order to realize the full potential of biotechnology for the developing world, the technology must target crops grown locally in the developing countries and the traits that are most relevant to the local farmers and consumers. At the same time, proposals should meet the broad goals of the PGRP described in the current Program Solicitation. **For more information go to:** www.nsf.gov/pubsys/ods/getpub.cfm?nsf04563

National Facilities

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted any time

Eligibility: Unrestricted

CFDA Number: 47.049

Funding Opportunity Number: PD-05-1743

Supports the operation of national user facilities: research facilities with specialized instrumentation available to the scientific research community in general and the materials research community in particular. These facilities provide unique research capabilities that can be located at only a few highly specialized laboratories in the nation. They include facilities and resources for research using high magnetic fields, ultraviolet and x-ray synchrotron radiation, neutron scattering, and nanofabrication. **For more information go to:** www.nsf.gov/funding/pgm_summ.jsp?pims_id=5359

Lower Atmospheric Observing Facilities

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted any time

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-04-1529

The National Science Foundation (NSF), Division of Atmospheric Sciences (ATM), Lower Atmospheric Observing Facilities (LAOF) Program consists of planning, budgeting,

coordination, and oversight of multi-user national facilities that are sponsored by NSF for the geosciences research community. Program Management resides within ATM in the UCAR and Lower Atmospheric Facilities Oversight Section (ULAFOS) which provides a single point for coordination. Geosciences research often requires specialized facilities, instrumentation and field support services to carry out scientific field work that is needed to understand the complex, interdependent geophysical processes, often covering remote areas of the globe. Making platforms and instrumentation available to support scientific experiments depends upon adequate acquisition, operation, maintenance, upgrading and replacement of these facilities. Also these platforms and instruments may collect large and sometimes unique data sets that must be validated, archived and made available to the research community. Likewise both pre- and post-planning for scientific field programs (e.g., experimental design, operational plans, logistical support) in which NSF sponsored facilities are deployed is an important element of the overall program. **For more information go to:**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12807

Climate and Large-Scale Dynamics

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted any time

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-06-5740

The goals of the Program are to: (i) advance knowledge about the processes that force and regulate the atmosphere's synoptic and planetary circulation, weather and climate, and (ii) sustain the pool of human resources required for excellence in synoptic and global atmospheric dynamics and climate research. Research topics include theoretical, observational and modeling studies of the general circulation of the stratosphere and troposphere; synoptic scale weather phenomena; processes that govern climate; the causes of climate variability and change; methods to predict climate variations; extended weather and climate predictability; development and testing of parameterization of physical processes; numerical methods for use in large-scale weather and climate models; the assembly and analysis of instrumental and/or modeled weather and climate data; data assimilation studies; development and use of climate models to diagnose and simulate climate and its variations and change. Some Climate and Large Scale Dynamics (CLD) proposals address multidisciplinary problems and are often co-reviewed with other NSF programs, some of which, unlike CLD, use panels in addition to mail reviewers, and thus have target dates or deadlines. Proposed research that spans in substantive ways topics appropriate to programs in other divisions at NSF, e.g., ocean sciences, ecological sciences, hydrological sciences, geography and regional sciences, applied math and statistics, etc., must be submitted at times consistent with target dates or deadlines established by those programs. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11699

Aeronomy

Granting Agency: National Science Foundation

Current Closing Date for Applications: no specified closing date

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-98-1521

The Aeronomy program supports research on upper and middle atmosphere phenomena of ionization, recombination, chemical reaction, photo emission, and transport; the transport of energy, and momentum. This program also supports research into mass in the mesosphere-thermosphere-ionosphere system including the processes involved and the coupling of this global system to the stratosphere below and magnetosphere above and the plasma physics of phenomena manifested in the coupled ionosphere-magnetosphere system, including the effects of high-power radio wave modification. About the Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) Program. **For more information go to:**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11686

Atmospheric Chemistry

Granting Agency: National Science

Foundation

Current Closing Date for Applications: no specified closing date

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-98-1521

Supports research to measure and model the concentration and distribution of gases and aerosols in the lower and middle atmosphere. Also supports research on the chemical reactions among atmospheric species; the sources and sinks of important trace gases and aerosols; the aqueous-phase atmospheric chemistry; the transport of gases and aerosols throughout the atmosphere; and the improved methods for measuring the concentrations of trace species and their fluxes into and out of the atmosphere. **For more information go to:**

www.nsf.gov/funding/pgm_summ.jsp?pims_id=11692

Mathematical Sciences Infrastructure

Program

Granting Agency: National Science Foundation

Current Closing Date for Applications: This program accepts proposals at any time during the year and has no fixed due dates.

Eligibility: Unrestricted

CFDA Number: 47.049

Funding Opportunity Number: PD-04-1260

The Infrastructure Program provides support for activities that differ from the research projects supported by the disciplinary programs of the Division of Mathematical Sciences. These include working research sessions, such as conferences, symposia, colloquia, and special years, as well

as training programs, such as grants for broadening education in the mathematical sciences or increasing the number of individuals in disciplines that are based in the mathematical sciences. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12756

Geospace Facilities

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted anytime

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-04-4202

The National Science Foundation supports four large incoherent-scatter radar facilities and the SuperDARN coherent scatter radar system. The incoherent-scatter radars are located along a longitudinal chain from Greenland to Peru. Each of the incoherent-scatter facilities is also equipped with powerful optical diagnostic instruments. The SuperDARN consists of a number of coherent-scatter HF radars in both the northern and southern hemispheres. See below for links to the homepages of each of the facilities. Millstone Hill Observatory Website at <http://www.haystack.mit.edu/> -- Sondrestrom Radar Facility Website at <http://isr.sri.com/> -- Arecibo Observatory Website at <http://www.naic.edu/> -- Jicamarca Radio Observatory Website at <http://jro.igp.gob.pe/> -- Super Dual Auroral Radar Network Website at <http://superdarn.jhuapl.edu/>. The major goal of the Upper Atmospheric Facilities (UAF) is to promote basic research on the structure and dynamics of the Earth's upper atmosphere. Research efforts utilizing these facilities have strong links to the Aeronomy Program and the Magnetospheric Physics Program. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12808

Solar Terrestrial

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted anytime

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-98-1523

Supports research on the processes by which energy in diverse forms is generated by the Sun, transported to the Earth, and ultimately deposited in the terrestrial environment. Major topics include space weather impacts, helioseismology, the solar dynamo, the solar activity cycle, magnetic flux emergence, solar flares and eruptive activity, coronal mass ejections, solar wind heating, solar energetic particles, interactions with cosmic rays, and solar wind/magnetosphere boundary problems. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12741

Physical and Dynamic Meteorology

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted anytime

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-98-1522

Physical and Dynamic Meteorology supports research involving studies of cloud physics; atmospheric electricity; radiation; boundary layer and turbulence; the initiation, growth, and propagation of gravity waves; all aspects of mesoscale meteorological phenomena, including their morphological, thermodynamic, and kinematic structure; development of mesoscale systems and precipitation processes; and transfer of energy between scales. The program also sponsors the development of new techniques and devices for atmospheric measurements. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12728

Paleoclimate

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted anytime

Eligibility: Unrestricted

CFDA Number: 47.050

Funding Opportunity Number: PD-98-1530

Supports research on the natural evolution of Earth's climate with the goal of providing a baseline for present variability and future trends through improved understanding of the physical, chemical, and biological processes that influence climate over the long-term. The Geosciences Directorate and the Office of Polar Programs have joined in creating the annual Paleo Perspectives on Climate Change (P2C2)

(http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5750) competition in paleoclimate global change research. Researchers are encouraged to consider the P2C2 competition as a possible source of support for their global change research. Since proposals eligible for funding in the P2C2 competition are not eligible for funding in the Paleoclimate Program, researchers are strongly advised to contact the Director of the Paleoclimate Program for guidance as to the suitability of their proposed research for either program. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12727

Magnetospheric Physics

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals accepted anytime

Eligibility: Unrestricted

CFDA Number: 47.049

Funding Opportunity Number: PD-98-5750

Supports research on the magnetized plasma envelope of the outer atmosphere, including energization by the solar wind; the origin of geomagnetic storms and substorms; the population by solar and ionospheric sources; the origin of electric fields; the coupling among the magnetosphere, ionosphere, and atmosphere; and waves and instabilities in the natural plasma. Also supported are ground-based observational programs at high latitudes and laboratory experiments applicable to the geospace environment. Theoretical research programs may include numerical simulations using a variety of MHD, hybrid and particle codes. The analysis of data

from all sources, whether ground-based or from spacecraft, is also supported. **For more information go to:** www.nsf.gov/funding/pgm_summ.jsp?pims_id=11725

Supplemental Opportunity for SBIR/STTR Memberships in I/UCRCs

Granting Agency: National Science Foundation

Current Closing Date for Applications: Supplement Accepted Anytime

Eligibility: Unrestricted

CFDA Number: 47.049

Funding Opportunity Number: PD-09-5761

NSF invites supplemental requests for Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) grantees to join an Industry/University Cooperative Research Center (I/UCRC). The supplements are intended to accelerate the innovation process by partnering industry-relevant academic research with commercialization focused small business research. The supplements will enable small businesses to purchase annual memberships in I/UCRCs; thus opening the doors to the benefits of the centers' collaborative research endeavors, which are directed to the needs of specific industries. Please see the "Related URL" section for additional information about this opportunity. **For more information go to:** http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503192

Research Techs

Granting Agency: National Park Service

Current Closing Date for Applications: Supplement Accepted Anytime

Expected Number of Awards: 1

Eligibility: Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education

Estimated Total Project Funding: \$125,994

CFDA Number: 15.931

Funding Opportunity Number: PD-09-5761

The objective of this Task Agreement is to support and stimulate work and/or education and training opportunities for young adults through collaborative participation in natural resource research and inventory and monitoring for the parks of the Mojave Desert Network.

Cooperative Research Units Program FY 2014

Granting Agency: Geological Survey — Department of the Interior

Current Closing Date for Applications: June 24, 2014 (new or changes in scope of work or total estimated cost) August 13, 2014 (other changes not involving change to scope of work or total estimated cost)

Eligibility: Only CRU Cooperating Universities are eligible to apply to the RWO component of the Cooperative Research Unit Program pursuant to the Cooperative Research Unit Act (Public Law 86-686).

Estimated Total Project Funding: \$2,250,000

CFDA Number: 15.812

Funding Opportunity Number: G14AS00004

The Cooperative Research Units Program is a unique collaborative relationship between States, Universities, the Federal government and a non-profit organization. The program is comprised of 40 Cooperative Fish and Wildlife Research Units on university campuses in 38 states. Since the original nine Units were established in the 1930s, additional Units were established by Congress at specified universities. The 40 units in the program are jointly supported by the US Geological Survey, Host Universities, State Natural Resource Agencies, Wildlife Management Institute, and the US Fish and Wildlife Service.

High-Risk Research in Anthropology

Granting Agency: National Science Foundation

Current Closing Date for Applications: Proposals Accepted Anytime

Expected Number of Awards: 5

Eligibility: Unrestricted

Estimated Total Project Funding: \$125,000

CFDA Number: 47.075

Funding Opportunity Number: 08-523

Anthropological research may be conducted under unusual circumstances, often in distant locations. As a result the ability to conduct potentially important research may hinge on factors that are impossible to assess from a distance and some projects with potentially great payoffs may face difficulties in securing funding. This program gives small awards that provide investigators with the opportunity to assess the feasibility of an anthropological research project. The information gathered may then be used as the basis for preparing a more fully developed research program. Projects which face severe time constraints because of transient phenomena or access to materials may also be considered. Investigators must contact the cognizant NSF Program Director before submitting an HRRR proposal. This will facilitate determining whether the proposed work is appropriate for HRRR support.

Partners for Fish and Wildlife 2014

Granting Agency: Fish and Wildlife Service — Department of the Interior

Current Closing Date for Applications: At least 30 days before the end of FY14

Expected Number of Awards: 5000

Eligibility: Private institutions of higher education; for profit organizations other than small businesses; Small businesses; Individuals; Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; Public and State controlled institutions of higher education

Estimated Total Project Funding: \$125,000

CFDA Number: 15.631

Funding Opportunity Number: F14AS00015

Anthropological research may be conducted under unusual circumstances, often in distant locations. As a result the ability to conduct potentially important research may hinge on factors that are impossible to assess from a distance and some projects with potentially great payoffs may face difficulties in securing funding. This program gives small awards that provide investigators with the opportunity to assess the feasibility of an anthropological research project. The information gathered may then be used as the basis for preparing a more fully developed research program. Projects which face severe time constraints because of transient phenomena or access to materials may also be considered. Investigators must contact the cognizant NSF Program Director before submitting an HRRR proposal. This will facilitate determining whether the proposed work is appropriate for HRRR support.

National Fish Habitat Action Plan

Granting Agency: Fish and Wildlife Service

— **Department** of the Interior

Current Closing Date for Applications: There is no closing date for applications. Project proposals are accepted continuously. Proposals are held in a FWS database until the project is funded or no longer available.

Expected Number of Awards: 65

Eligibility: Unrestricted; this announcement is only open to entities associated with Fish Habitat Partnerships approved by the National Fish Habitat Board. Information on Fish Habitat Partnerships is available at: www.fishhabitat.org

Estimated Total Project Funding: \$4,000,000

CFDA Number: 15.608

Funding Opportunity Number: F14AS00012

The National Fish Habitat Action Plan is a national investment strategy to leverage federal and privately raised funds to protect, restore and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation.

RESEARCH OPPORTUNITIES IN AERONAUTICS – 2014

Granting Agency: NASA Headquarters — National Aeronautics and Space Administration

Current Closing Date for Applications: Detailed Proposals with specific due dates will be accepted through December 31, 2014. Detailed requirements for Proposal Due Dates will be identified in the NRA Tables and Appendices that address individual Thrust Areas.

Expected Number of Awards:

Eligibility: Unrestricted

Estimated Total Project Funding:

CFDA Number: 43.002

Funding Opportunity Number: NNH14ZEA001N

This publication announces the National Aeronautics and Space Administration (NASA), Headquarters, Aeronautics Research Mission Directorate (ARMD) plans to release the Fiscal Year (FY) 2014 version of the NASA Research Announcement (NRA) entitled, "Research Opportunities in Aeronautics (ROA)", NNH14ZEA001N. Detailed requirements, including Proposal Due Dates will be stated in Appendices that address individual Thrust Areas. Appendices will be posted as Amendments to the ROA NRA and will be published as requirements materialize throughout the year. The Under the FY 2014 ROA NRA ARMD will continue solicitation of foundational and systems-level research proposals for five programs within ARMD: the Airspace Systems Program, the Aviation Safety Program, the Fundamental Aeronautics Program, the Integrated Systems Research Program, and the Aeronautics Strategy and Management Program. The Airspace Systems Program will directly address the Air Traffic Management (ATM) research needs of the Next Generation Air Transportation Systems (NextGen) initiative as defined by the Joint Planning and Development Office (JPDO). The Aviation Safety Program will take a proactive approach to safety challenges with new and current vehicles operating in the Nation's current and future air transportation system. The Fundamental Aeronautics Program will pursue long-term, cutting edge research in all flight regimes to produce data, knowledge, and design tools that will be applicable across a broad range of air vehicles that fly through any atmosphere at any speed. The Integrated Systems Research Program will conduct research at an integrated system-level on promising concepts and technologies and explore/assess/demonstrate the benefits in a relevant environment. The Aeronautics Strategy and Management Program provides research and programmatic support that benefits each of the other ARMD programs. The program efficiently manages directorate functions including: Innovative Concepts for Aviation, Education and Outreach, and Cross Program Operations. **For more information go to:**
<http://gsi.nist.gov/global/docs/2FY14FFO.pdf>

NIST Standards Services Curricula Development Cooperative Agreement Program

Granting Agency: National Institute of Standards and Technology — Department of Commerce
Current Closing Date for Applications: Applications must be received electronically through Grants.gov no later than 11:59 p.m. Eastern Time, Monday, March 31, 2014. Applications received after this deadline will not be reviewed or considered.

Eligibility: Institutions of higher education; non-profit organizations; commercial organizations. An eligible applicant may work individually or include proposed sub-awards or contracts with others in a project application, effectively forming a team or consortium.

CFDA Number: 11.620

Funding Opportunity Number: 2014-NIST-SSCD-01

The Standards Services Curricula Development Cooperative Agreement Program provides financial assistance to support curriculum development for the undergraduate and/or graduate level. These cooperative agreements support the integration of standards and standardization

information and content into seminars, courses, and learning resources. The recipients will work with NIST to strengthen education and learning about standards and standardization. **For more information** go to: <http://nspires.nasaprs.com/>

FY 2014 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM

Granting Agency: National Institute of Standards and Technology — Department of Commerce
Current Closing Date for Applications: May 2, 2014.

Eligibility: Potential applicants should carefully read the Full Announcement/FFO document for details on eligibility for the FY 2014 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM. Each applicant for both Phase I and Phase II must qualify as a small business concern for research or R&D (R/R&D) purposes, as defined in Section 1.06 of this FFO, at the time of award. In addition, the primary employment of the principal investigator must be with the small business at the time of the award and during the conduct of the proposed research. Primary employment means that more than one-half of the principal investigator's time is spent with the small business. Primary employment with a small business precludes full-time employment with another organization. Occasionally, deviations from this requirement may occur, and must be approved in writing by the NIST Grants Officer after consultation with the SBIR Program Manager. Further, a small business may replace the principal investigator on an SBIR Phase I or Phase II award, subject to approval in writing by the NIST Grants Officer. Personnel obtained through a Professional Employer Organization or other similar personnel leasing company may be considered employees of the awardee.

CFDA Number: 11.620

Funding Opportunity Number: 2014-NIST-SBIR-01

The National Institute of Standards and Technology (NIST) invites small businesses to submit Phase I research applications under this Federal Funding Opportunity (FFO). Firms with strong research capabilities in any of the areas listed in Section 9 of the Full Announcement/FFO document are encouraged to participate. Applications not addressing one of the Subtopics in Section 9 are not responsive to this FFO. NIST offers two types of Subtopics in Section 9 of this FFO: standard research “R” and tech transfer “TT” Subtopics. Both “R” and “TT” subtopics are intended to cultivate private sector innovation and foster and encourage participation by minority and disadvantaged persons in technological innovation. **For more information go to:**

<http://www.nist.gov/tpo/sbir/upload/fy14-final-2.pdf>

Mining and Understanding Software Enclaves (MUSE)

Granting Agency: Defense Advanced Research Projects Agency — Department of Defense
Current Closing Date for Applications: 04/15/14

Expected Number of Awards:

Eligibility: Unrestricted

CFDA Number: 12.910

Funding Opportunity Number: DARPA-BAA-14-22

The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative research proposals in the areas of program analysis, verification, and big data analytics for specifying, discovering, and understanding properties of complex software systems. Proposed research should investigate innovative approaches that enable revolutionary advances in science, methods, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice. This broad agency announcement (BAA) is being issued, and any resultant selection will be made, using procedures under Federal Acquisition Regulation (FAR) 35.016. **For more information, email:** MUSE@darpa.mil

Enhancing Access to the Radio Spectrum

Granting Agency: National Science Foundation

Current Closing Date for Applications: 04/18/14

Expected Number of Awards: 48

Eligibility: Non-profit; non-academic organizations; Independent museums; observatories; research labs; professional societies and similar organizations in the U.S. associated with educational or research activities; Universities and Colleges

Estimated Total Program Funding: \$36,000,000

CFDA Number: 47.041 / 47.049 / 47.070

Funding Opportunity Number: 14-529

The National Science Foundation's Directorates for Mathematical and Physical Sciences (MPS), Engineering (ENG), and Computer and Information Science and Engineering (CISE) are coordinating efforts to identify bold new concepts with the potential to contribute to significant improvements in the efficiency of radio spectrum utilization, and in the ability for traditionally underserved Americans to benefit from current and future wireless-enabled goods and services. EARS seeks to fund innovative collaborative research that transcends the traditional boundaries of existing programs, such as research that spans disciplines covered by two or more of the participating NSF directorates. **For more information, go to:**

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14529

Scientific Discovery through Ultrafast Materials and Chemical Sciences

Granting Agency: Office of Science — Department of Energy - Office of Science

Current Closing Date for Applications: 04/21/14

Eligibility: Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; For profit organizations other than small businesses; Private institutions of higher education; Small businesses; Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; Applications will only be accepted from organizations.

CFDA Number: 81.049

Funding Opportunity Number: DE-FOA-0001089

The Office of Basic Energy Sciences (BES), U.S. Department of Energy (DOE), announces its interest in receiving applications from small collaborative groups of investigators for support of

combined experimental and theoretical efforts to advance ultrafast chemical and materials science. A companion Program Announcement to the DOE National Laboratories (LAB 14-1089) will be posted on the SC Grants and Contracts website at <http://science.energy.gov/grants>
For more information, go to: <https://www.fedconnect.net/FedConnect/Default.htm>

NSF-CBMS Regional Research Conferences in the Mathematical Sciences

Granting Agency: National Science Foundation

Current Closing Date for Applications: 04/25/14

Expected Number of Awards: 10

Eligibility: Others; Non-profit, non-academic organizations; Independent museums; observatories; research labs; professional societies and similar organizations in the U.S. associated with educational or research activities; Universities and Colleges

Estimated Total Program Funding: \$350,000

CFDA Number: 47.049

Funding Opportunity Number: 13-550

The NSF-CBMS Regional Research Conferences in the Mathematical Sciences are a series of five-day conferences each of which features a distinguished lecturer delivering ten lectures on a topic of important current research in one sharply focused area of the mathematical sciences. CBMS refers to the Conference Board of the Mathematical Sciences which publicizes the conferences and administers the resulting publications. Support is provided for about 30 participants at each conference. Proposals should address the unique characteristics of the NSF-CBMS conferences, outlined in the Program Description. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13550

Women and Minorities in Science, Technology, Engineering and Mathematics Fields Program

Granting Agency: National Institute of Food and Agriculture — Department of Agriculture

Current Closing Date for Applications: 04/28/14

Eligibility: State agricultural experiment stations; colleges and universities; university research foundations; other research institutions and organizations; Federal agencies; national laboratories; private organizations or corporations; individuals

Estimated Total Program Funding: \$400,000

CFDA Number: 10.318

Funding Opportunity Number: USDA-NIFA-WAMS-004491

This program supports research and extension projects that have robust collaborations to increase the participation of women and underrepresented minorities from rural areas in science, technology, engineering, and mathematics fields that are relevant to USDA priorities identified by the Secretary: (i) Promotion of a safe, sufficient, and nutritious food supply for all Americans

and for people around the world; (ii) Sustainable agricultural policies that foster economic viability for small and mid-sized farms and rural businesses, protect natural resources, and promote value-added agriculture; (iii) national leadership in climate change mitigation and adaptation; (iv) Building a modern workplace with a modern workforce; and (v) Support for 21st century rural communities. **For more information, go to:**
<http://www.nifa.usda.gov/funding/rfas/wams.html>

Sustainability Research Networks Competition

Granting Agency: National Science Foundation

Current Closing Date for Applications: 04/29/14

Expected Number of Awards: 4

Eligibility: Universities and Colleges

Estimated Total Program Funding: \$36,000,000

CFDA Number: 47.041, 47.049, 47.050, 47.070, 47.074, 47.075, 47.076, 47.079, 47.081

Funding Opportunity Number: 14-534

The goal of the Sustainability Research Networks (SRN) competition is to bring together multidisciplinary teams of researchers, educators, managers, policymakers and other stakeholders to conduct collaborative research that addresses fundamental challenges in sustainability. The 2014 SRN competition will fund research networks with a focus on urban sustainability. Proposals should identify an ambitious and nationally important theme in urban sustainability, present a creative and innovative research agenda that builds upon existing work in this area, and describe how a network of researchers and other stakeholders will be supported that integrates a variety of disciplines, sectors and backgrounds in order to create new perspectives and yield significant new understanding and knowledge. The Sustainability Research Networks competition is part of the growing NSF investment in its Science, Engineering and Education for Sustainability (SEES) portfolio (www.nsf.gov/sees/). Challenges associated with broadly based SEES goals will be met by supporting fundamental science and engineering research and education needed to understand and overcome the barriers to sustainable human and environmental wellbeing and to forge reasoned pathways to a sustainable future. NSF aims to support members of the academic research community for projects which produce discoveries and knowledge that will inform decisions leading to environmental, energy, social and cultural sustainability. NSF support will advance the frontiers of conceptual, empirical and computational research in science, engineering and education so that the nation has the knowledge base to inform policies on sustainability. **For more information, go to:**
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14534

Partnerships for Innovation: Accelerating Innovation Research

Granting Agency: National Science Foundation

Current Closing Date for Applications: 05/01/14

Expected Number of Awards: 40

Eligibility: Universities and Colleges

Estimated Total Program Funding: \$8,000,000

CFDA Number: 47.041

Funding Opportunity Number: 13-575

Paragraph-long description: The NSF Partnerships for Innovation (PFI) program within the Division of Industrial Innovation and Partnerships (IIP) is an umbrella for two complementary subprograms, Accelerating Innovation Research (AIR) and Building Innovation Capacity (BIC). In the final analysis, both programs are concerned with the movement of academic research discoveries into the marketplace although each focuses on different stages along the innovation spectrum. The subject of this solicitation is PFI: AIR Technology Translation (TT) only. The PFI: AIR-TT solicitation is intended to help bridge the funding gap between existing research discoveries that validate relevant science and engineering fundamentals and their translation through proof-of-concept, prototype, or scale-up along a path toward commercialization and engage faculty and students in entrepreneurial/innovative thinking. **WEBINAR:** A webinar will be held within 6 weeks of the release date of this solicitation to answer any questions about this solicitation. Details will be posted on the IIP website (<http://www.nsf.gov/eng/iip/pfi/index.jsp>) as they become available. **For more information, go to:**

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13575

Broadening Participation in Engineering

Granting Agency: National Science Foundation

Current Closing Date for Applications: 05/01/14

Expected Number of Awards: 15

Eligibility: Unrestricted

Estimated Total Program Funding: \$300,000

CFDA Number: 47.041

Funding Opportunity Number: PD-14-7680

The Broadening Participation in Engineering (BPE) Program is a Directorate-wide activity to support the development of a diverse and well-prepared workforce of engineering graduates, particularly those with advanced degrees. The BPE Program supports projects to engage and develop diverse teams that can offer unique perspectives and insights to challenges in engineering research and education. Throughout this program description, the term underrepresented groups will refer to and include the following: women, persons with disabilities, and ethnic/racial groups which are in the minority in engineering, specifically African Americans, Hispanics, Native Americans, Alaska Natives, and Pacific Islanders. The 2010 Census provides a snapshot of the demographics for United States citizens. Hispanic Americans are at 16% of our population; African Americans constitute 13.6%; American Indians/Alaskan Natives represent 1.7%; and Native Hawaiians and Pacific Islanders are at 0.4%. In aggregate, racial/ethnic minorities make up 31.7% of the US population. According to data collected by the American Society for Engineering Education, in 2012, underrepresented racial/ethnic minorities earned only 12.6% of all bachelor's degrees, 7.9% of all master's degrees and 4.6% of all doctoral degrees in engineering across all 345 degree granting institutions. The diversity of engineering faculty ranks is significantly smaller, particularly as the rank increases.

Underrepresented racial/ethnic minorities constitute 8.6% of all assistant professors, 8.7% of associate professors, and 5.8% of full professors. **For more information, go to:**
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504870

High Performance Computing System Acquisition: Continuing the Building of a More Inclusive Computing Environment for Science and Engineering.

Granting Agency: National Science Foundation

Current Closing Date for Applications: May 14, 2014

Estimated Total Program Funding: \$10,000,000

CFDA Number: 47.070

Funding Opportunity Number: 14-536

The intent of this solicitation is to request proposals from organizations willing to serve as Resource Providers within the NSF eXtreme Digital (XD) program. The current solicitation is intended to complement previous NSF investments in advanced computational infrastructure by exploring new and creative approaches to delivering innovative computational resources to an increasingly diverse community and portfolio of scientific research and education. NSF's vision for Advanced Computing Infrastructure, which supports Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21), focuses specifically on ensuring that the science and engineering community has ready access to the advanced computational and data-driven capabilities required to tackle the most complex problems and issues facing today's scientific and educational communities. To accomplish these goals requires advanced computational capabilities within the context of a multilevel comprehensive and innovative infrastructure that benefits all fields of science and engineering. **For more information, go to:**

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14536

Supply Chain Hardware Integrity for Electronics

Granting Agency: DARPA - Microsystems Technology Office — Department of Defense

Current Closing Date for Applications: Mar 30, 2014

Eligibility: Unrestricted

Estimated Total Program Funding: \$4,770,000

CFDA Number: 12.910

Funding Opportunity Number: DARPA-BAA-14-16

DARPA is soliciting innovative research proposals in the area of supply chain protection of electronic components. Proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. See the full DARPA-BAA-14-16 document attached. **For more information, go to:**

http://www.darpa.mil/Opportunities/Solicitations/DARPA_Solicitations.aspx#MTO

Hydrologic Sciences

Granting Agency: National Science Foundation

Current Closing Date for Applications: June 3, 2014

Eligibility: Public and State controlled institutions of higher education; Private institutions of higher education

Estimated Total Program Funding: \$10,000,000

CFDA Number: 47.050

Funding Opportunity Number: 13-531

The Hydrologic Sciences Program focuses on the fluxes of water in the environment that constitute the water cycle as well as the mass and energy transport function of the water cycle in the environment. The Program supports studying processes from rainfall to runoff to infiltration and stream flow; evaporation and transpiration; as well as the flow of water in soils and aquifers and the transport of suspended, dissolved and colloidal components. Water is seen as the mode of coupling among various components of the environment and emphasis is placed on how the coupling is enabled by the water cycle and how it functions as a process. The Hydrologic Sciences Program retains a strong focus on linking the fluxes of water and the components carried by water across the boundaries between various interacting components of the terrestrial system and the mechanisms by which these fluxes co-organize over a variety of timescales and/or alter the fundamentals of the interacting components. **For more information, go to:** http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13531

Cyber-Physical Systems

Granting Agency: National Science Foundation

Current Closing Date for Applications: June 2, 2014

Eligibility: Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities. Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members.

Estimated Total Program Funding: \$35,000,000

CFDA Number: 20.200, 47.041, 47.070, 97.065

Funding Opportunity Number: 14-542

Cyber-physical systems (CPS) are engineered systems that are built from, and depend upon, the seamless integration of computational algorithms and physical components. Advances in CPS will enable capability, adaptability, scalability, resiliency, safety, security, and usability that will far exceed the simple embedded systems of today. CPS technology will transform the way people interact with engineered systems -- just as the Internet has transformed the way people interact with information. New smart CPS will drive innovation and competition in sectors such as agriculture, energy, transportation, building design and automation, healthcare, and manufacturing. **For more information, go to:**

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf14542

