WICHITA STATE UNIVERSITY
RESEARCH AND TECHNOLOGY TRANSFER

Funding Bulletin

August 12th, 2016 (Vol. 3, No. 22)

Funding Information

To receive funding information, please contact funding@wichita.edu.

NOTICE – Notification for the current Funding Bulletin is sent via email. To be added to the electronic mailing list, send an email message to: *funding@wichita.edu.* Leave the subject line blank. In the message area, type: *sub funding bulletin.* To unsubscribe, type: *unsub funding bulletin.*

The selected compilation of funding opportunities is provided by RTT's Pre-Award Services as a resource for Wichita State University Researchers. We encourage you to utilize the campus subscription to PIVOT to find funding opportunities specifically tailored to your research area based on keywords you provide. PIVOT is easy to use and offers other valuable services that are helpful to researchers. Access is available at: *http://pivot.cos.com/home/index* or you may contact *funding@wichita.edu* to have a custom search ran.

Click on the links below to go directly to the named section included in this edition's bulletin

How to Apply

Proposal development requests should be sent to *proposals@wichita.edu.* Please click on the following link for information regarding proposal submission at WSU:

http://webs.wichita.edu/?u=WSURESEARCHADMIN&p=/Proposals/PreAwardServices/

WICHITA STATE UNIVERSITY
RESEARCH AND TECHNOLOGY TRANSFER

OFFICE OF RESEARCH WORKSHOPS

For more information contact Jana Henderson at jana.henderson@wichita.edu or 978-3285.

For complete schedule go to: http://webs.wichita.edu/?u=wsuresearchadmin&p=/researchworkshops/

WORKSHOP TITLE	DATE	TIME	ROOM	DESCRIPTION
Research Compliance Open Lab	August 17	9:00 – 11:00 a.m.	2015 Devlin Hall Innovation hub	The Research Compliance Office will hold an open lab for questions regarding hiring foreign nationals; shipping or receiving items from outside the US; international travel; review of Research projects for export compliance; conflicts of interest & management plans. ***This is a come and go lab with no registration required.***
Animals & People, Oh My! An Overview of IRB and IACUC	August 19	1:00 – 2:30 p.m.	405 Jardine	Presenters: Katie Williams & Linda Steinacher. Please RSVP through the WSU My Training Portal.
Pivot Open Lab	August 25	2:30 – 4:00 p.m.	409E Jardine	The Office of Research will be holding Open Labs this fall for Faculty interested in using PIVOT as well as answering questions regarding their existing account. ***This is a come and go lab with no registration required.***
Award Management: Keeping Your Award on Track to the Final Report	Sept. 21	2:30 – 4:00 p.m.	405 Jardine	This workshop will cover grant set-up, reporting requirements, research payroll, internal and external grant period extensions, and making budget changes. Presenter: Amy Delgado, Associate Director of Post-Award. RSVP through WSU My Training Portal.
Compliance: Export, Conflict of Interest	Oct. 5	2:30 – 4:00 p.m.	409E Jardine	Conflict of Interest Policies, Export 101 RSVP through WSU My Training Portal.
Technology Transfer & Intellectual Property: WSU Ventures	Oct. 14	1:00 – 2:30 p.m.	405 Jardine	Everyone has intellectual property – what do I own, what does the University own, how can I protect it? RSVP through WSU My Training Portal.
Resources for Researchers	Oct. 26	2:30 – 4:00 p.m.	405 Jardine	Come hear about the WSU resources available to you as a researcher: T3, Ennovar and many others! RSVP through WSU My Training Portal.

NOTICES

National Science Foundation (NSF) Dear Colleague Letter: Data Resources for the BRAIN Initiative (NSF 16-115)
http://www.nsf.gov/pubs/2016/nsf16115/nsf16115.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

National Science Foundation (NSF) Dear Colleague Letter: NSF Support for DARPA Spectrum Collaboration Challenge (SC2) Participants (NSF 16-114)
http://www.nsf.gov/pubs/2016/nsf16114/nsf16114.pdf?WT.mc_id=USNSF_25&WT.mc_ev=click

National Science Foundation (NSF) Dear Colleague Letter: Supporting Fundamental Research in Unmanned Aerial Systems (UAS) (NSF 16-123)
http://www.nsf.gov/pubs/2016/nsf16123/nsf16123.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

INTERNAL OPPORTUNITIES

Multidisciplinary Research Project Awards (MURPA)
Wichita State University
Due Date: 10/7/2016

Applications for Multidisciplinary Research Project Awards (MURPA) are due to the Office of Research and Technology Transfer by Oct. 7 at 5:00 p.m. for grant period, choice of Jan 1 – June 15, 2017 OR May 1 – Aug 31, 2017. Multidisciplinary Research Projects are projects that involve two or more investigators from different disciplines that focus different perspectives and capabilities on complex problems that intersect established areas of study. They are intended as seed money to develop pilot data for proposals to be submitted to governmental agencies, foundations or industries. Application and instructions are available on the research website and may be submitted electronically to proposals@wichita.edu or Campus Box 7.

For more information, visit
http://webs.wichita.edu/?u=WSURESEARCHADMIN&p=/ORAInternalGrants/ORAInternalGrants/

University Research/Creative Projects (URCA) – Round Two
Wichita State University
Due Date: 10/7/2016

Applications for Round 2 of the University Research/Creative Projects (URCA) are due to the Office of Research and Technology Transfer by Oct. 7 at 5:00 p.m. for grant period Dec 1, 2016 – Dec 31, 2017. URCAs are to retool or reestablish productive research/creative projects agenda. In areas where external funding is available, the URCA may be used as seed money to develop pilot data. Areas where access to external sources is limited may receive special consideration. Grants may be for up to $4,500 awarded in two separate competitions: New - tenure-eligible faculty in their first or second year of probation to initiate research/creative projects, and Established - tenured faculty or probationary faculty in their 3rd (or more) year of probation to retool or re-establish productive research/creative agenda. Application and instructions are available on the research website and may be submitted electronically to proposals@wichita.edu or Campus Box 7.

For more information, visit
http://webs.wichita.edu/?u=wsuresearchadmin&p=/ORAInternalGrants/ORAInternalGrants/

LIMITED SUBMISSIONS

Limited submission programs have sponsor restrictions on the number of proposals that may be submitted by a single institution and will require institutional screening to determine which applications will be submitted. Karen Davis, Director of Pre-Award Services, is the internal coordinator for limited submission programs. Please notify *proposals@wichita.edu*, by the internal NOI due date listed in the Funding Bulletin if you wish to submit a limited submission program. **Because many limited submission programs often have short turnaround times, it is important that researchers also periodically check the Office of Research's *Limited Submission Opportunities* webpage for additional opportunities that may not have made it into the bulletin. There are currently *three* open limited submission competitions:**

(1) Environmental Grants

V. Kann Rasmussen Foundation (VKRF)
Due Date: Internal 8/19/2016; Letters of Inquiry 9/14/2016

The urgency of dealing with climate change, unsustainable consumption, and loss of biodiversity are the overall themes for VKRF. VKRF works primarily in the United States, but only on national and

international level issues. Any non-US funding must be multinational in scope and not focus on any specific country, region, or continent.

VKRF favors projects that:

- take stock of the scale of the environmental problems
- use a systems approach to achieve change
- link policy, advocacy, and practical solution
- have international significance and perspective - even if US based
- are based on original thinking and creative ideas

VKRF does not provide core funding. Currently, VKRF only evaluates projects that fall within one of the following categories:

Ecosystems Resilience, Protection and Restoration

- Ecosystem services - research and tools of relevance to large scale geographic areas including many countries and continents
- Natural greenhouse gas sequestration and storage with large-scale impact potential
- Agro-biodiversity

Framework of Ecological Stability

- Economic models of living within global limits and practical implementation of change to a stable global ecosystem
- Sustainable consumption, production, and land use

Communication and Leadership

- Communicating value-based living with sustainable use of water, energy, and food resources
- New innovative initiatives to enhance international cooperation and knowledge-sharing
- Next generation leadership

Each applicant is limited to submitting a maximum of 2 LOIs.

- **URL:** *http://www.vkrf.org/content/apply-funding*

(2) Platforms for Advanced Wireless Research (PAWR): Establishing the PAWR Project Office (PPO)

National Science Foundation (NSF)

Due Date: Internal 8/19/2016; Preliminary Proposal 9/20/2016; Full Proposal 11/23/2016

The Platforms for Advanced Wireless Research (PAWR) program aims to support advanced wireless research platforms conceived by the U.S. academic and industrial wireless research community. PAWR will enable experimental exploration of robust new wireless devices, communication techniques, networks, systems, and services that will revolutionize the nation's wireless ecosystem, thereby enhancing broadband connectivity, leveraging the emerging Internet of Things (IoT), and sustaining US

leadership and economic competitiveness for decades to come. In order to support the design, development, deployment, and operations of the advanced wireless research platforms, the National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) will support the work of a PAWR Project Office (PPO). Working closely with the wireless research community, the PPO will assume responsibility for design, development, and deployment of a set of advanced wireless research platforms. Upon successful completion of the design of advanced wireless research platforms, and contingent upon support from NSF management, the PPO will proceed to the development and deployment phases with funding provided by NSF as well as a PAWR Industry Consortium. Upon successful deployment of each individual research platform, the PPO may subsequently operate the platform in service to the wireless research community. ***An organization may participate in no more than one PPO proposal submitted to this solicitation. For collaborative proposals involving multiple institutions, the proposal should be submitted by only one institution, with funding for participating institutions made through subawards. Proposals should not be submitted as separately submitted collaborative proposals.*** **NSF 16-585**

- **URL:** *http://www.nsf.gov/pubs/2016/nsf16585/nsf16585.htm*

(3) NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)

National Science Foundation (NSF)

Due Date: Internal 1/13/2017; Full Proposals 4/20/2017

A well-educated science, technology, engineering, and mathematics (STEM) workforce is a significant contributor to maintaining the competitiveness of the U.S. in the global economy. The National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program addresses the need for a high quality STEM workforce in STEM disciplines supported by the program and for the increased success of low-income academically talented students with demonstrated financial need who are pursuing associate, baccalaureate, or graduate degrees in science, technology, engineering, and mathematics (STEM) [6], [16]. Recognizing that financial aid alone cannot increase retention and graduation in STEM, the program provides awards to Institutions of Higher Education (IHEs) to fund scholarships and to advance the adaptation, implementation, and study of effective evidence-based curricular and co-curricular activities that support recruitment, retention, transfer (if appropriate), student success, academic/career pathways, and graduation in STEM. The S-STEM program encourages collaborations among different types of partners: Partnerships among different types of institutions; collaborations of STEM faculty and institutional, educational, and social science researchers; and partnerships among institutions of higher education and local business and industry, if appropriate. The program seeks: 1) to increase the number of low-income academically talented students with demonstrated financial need obtaining degrees in STEM and entering the workforce or graduate programs in STEM; 2) to improve the education of future scientists, engineers, and technicians, with a focus on academically talented low-income students; and 3) to generate

knowledge to advance understanding of how factors or evidence-based curricular and co-curricular activities affect the success, retention, transfer, academic/career pathways, and graduation in STEM of low-income students. ***An Institution may submit one proposal (either as a single institution or as subawardee or a member of a Collaborative Research project) from each constituent school or college that awards degrees in an eligible field.*** **NSF 16-540**

- **URL:** *http://www.nsf.gov/pubs/2016/nsf16540/nsf16540.htm*

GENERAL

FY 2016 Sustainable Materials Management Grants
U.S. Environmental Protection Agency (EPA)
Due Date: 8/29/2016

EPA Region 7 is soliciting applications to address one or more of the three national Sustainable Materials Management Priorities identified below AND that have Region-wide reach or target activities in one or more of the Region 7 "Making a Visible Difference" communities (Council Bluffs, Iowa/Omaha, NE.; Muscatine, Iowa; Kansas City, MO/Kansas City, KS.; Wichita, KS; and St. Louis, Mo.). These projects must be implemented in EPA Region 7, which encompasses the states of Iowa, Kansas, Missouri and Nebraska. The three SMM national strategic priorities are: The Built Environment; Sustainable Food Management; and Sustainable Packaging. **EPA-R7AWMD-16-1**

- **URL:** *https://www.epa.gov/grants/fy-2016-grant-announcement-fy-2016-sustainable-materials-management-grants*

Early Career Research Program
United States Department of Energy (DOE) - Office of Science (OS)
Due Date: Pre-Applications 9/8/2016; Full Proposals 11/14/2016

The Office of Science hereby invites grant applications for support under the Early Career Research Program in the following program areas: Advanced Scientific Computing Research (ASCR); Biological and Environmental Research (BER); Basic Energy Sciences (BES), Fusion Energy Sciences (FES); High

Energy Physics (HEP), and Nuclear Physics (NP). The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by the DOE Office of Science. **Program opportunities exist in the following research programs:**

I. Advanced Scientific Computing Research (ASCR)
To advance applied mathematics and computer science; deliver the most advanced computational scientific applications in partnership with disciplinary science; advance computing and networking capabilities; and develop future generations of computing hardware and tools for science, in partnership with the research community, including U.S. industry. The strategy to accomplish this has two thrusts: developing and maintaining world-class computing and network facilities for science; and advancing research in applied mathematics, computer science, and advanced networking.

II. Biological and Environmental Research (BER)
To support fundamental research and scientific user facilities to achieve a predictive understanding of complex biological, climatic, and environmental systems for a secure and sustainable energy future.

III. Basic Energy Sciences (BES)
To support fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels in order to provide the foundations for new energy technologies and to support DOE missions in energy, environment, and national security.

IV. Fusion Energy Sciences (FES)
To expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundation needed to develop a fusion energy source. This is accomplished through the study of plasma, the fourth state of matter, and how it interacts with its surroundings.

V. High Energy Physics (HEP)
To understand how the universe works at its most fundamental level by discovering the elementary constituents of matter and energy, probing the interactions between them, and exploring the basic nature of space and time.

VI. Nuclear Physics (NP)
To discover, explore, and understand all forms of nuclear matter. Although the fundamental particles that compose nuclear matter - quarks and gluons - are themselves relatively well understood, exactly how they interact and combine to form the different types of matter observed in the universe today and during its evolution remains largely unknown.

DOE will accept new applications under this FOA. **DE-FOA-0001625**

- **URL:** *http://science.energy.gov/early-career/*

Black Hills Community Giving
Black Hills Corporation
Due Date: Accepting requests year-round

The Black Hills Corporation's Community Giving program provides support in the areas of:

- Arts and culture
- Civic and community development
- Education
- Environment
- Human services
- Youth development

Successful applicants will be:

- A 501(c)3 organization, a city government or an accredited school or university.
- Located in a community served by one of our utilities.

- **URL:** *http://www.blackhillscorp.com/community/community-giving*

ARTS & HUMANITIES

Collaborative Research Grants
National Endowment for the Humanities (NEH)
Due Date: 12/7/2016

Collaborative Research Grants support interpretive humanities research undertaken by two or more collaborating scholars, for full-time or part-time activities for periods of one to three years. Support is available for various combinations of scholars, consultants, and research assistants; project-related travel; field work; applications of information technology; and technical support and services. All grantees are expected to disseminate the results of their work to the appropriate scholarly and public audiences. **20151209-RZ**

Eligible projects include:
- research that significantly adds to knowledge and understanding of the humanities;
- conferences on topics of major importance in the humanities that will benefit scholarly research; and
- archaeological projects that include the interpretation and dissemination of results.

- **URL:** *http://www.neh.gov/grants/research/collaborative-research-grants*

Scholarly Editions and Translations Grants
National Endowment for the Humanities (NEH)
Due Date: 12/7/2016

Scholarly Editions and Translations grants support the preparation of editions and translations of pre-existing texts of value to the humanities that are currently inaccessible or available in inadequate editions. Typically, the texts and documents are significant literary, philosophical, and historical materials; but other types of work, such as musical notation, are also eligible. Projects must be undertaken by at least one editor or translator and one other collaborating scholar. Applicants should demonstrate familiarity with the best practices recommended by the Association for Documentary Editing or the Modern Language Association Committee on Scholarly Editions. Translation projects should also explain the theory and method adopted for the particular work to be translated. Editions and translations produced with NEH support contain scholarly and critical apparatus appropriate to the subject matter and format of the edition. This usually means introductions and annotations that provide essential information about a text's form, transmission, and historical and intellectual context. Proposals for editions of foreign language materials in the original language are eligible for funding, as well as proposals for editions of translated materials.

- **URL:** *http://www.neh.gov/grants/research/scholarly-editions-and-translations-grants*

Individual Support Grants
Gottlieb Foundation, Inc., Adolph & Esther
Due Date: 12/15/2016

The Foundation wishes to encourage artists who have dedicated their lives to developing their art, regardless of their level of commercial success. This program was conceived in order to recognize and support the serious, fully-committed artist, and it is hoped these individuals will consider applying. The disciplines of photography, film, video, or related forms are not eligible unless the work directly involves, or can be interpreted as, painting or sculpture.

- **URL:** *http://gottliebfoundation.org/grants/individual-grants/*

EDUCATION

OCTAE: Providing High-Quality Career and Technical Education Programs for Underserved, High-Need Youth Through a Pay for Success Model CFDA Number 84.051
United States Department of Education (ED)
Due Date: 8/25/2016

The purpose of this program is to support the development of a financing model, High-Quality Pay for Success (PFS), to implement new or scale up existing high-quality career and technical education (CTE) projects for Underserved, High-Need Youth (CTE PFS Project). To this end, the Department will award a grant to an Intermediary to provide technical assistance for the first two of three phases of a PFS financing model. In phase one, the Intermediary will complete Feasibility Studies in four Local CTE Sites. In phase two, the Intermediary will provide or support transaction structuring, based on the limited funding level, for up to three out of the previously identified four local sites to the extent that the local site's CTE PFS project is determined to be feasible. While it is our intent that all of the selected local CTE PFS projects will result in a fully-structured PFS project ready to launch, each program may have different challenges that might result in not all projects completing these first two phases by the end of the grant period. The ultimate aim of the CTE PFS TA Program is to improve outcomes for Underserved, High-Need Youth through fully-structured High-Quality PFS Projects ready to be implemented in the Local CTE Sites using High-Quality CTE programs. **ED-GRANTS-072616-001**

- **URL:** *http://www.grants.gov/web/grants/view-opportunity.html?oppId=286552*

ENGINEERING, MATHEMATICS & PHYSICAL SCIENCES

Robots in Manufacturing Environments Manufacturing Innovation Institute (RIME-MII)
U.S. Dept. of Defense (DOD) - Department of the Army - U.S. Army Materiel Command (AMC)
Due Date: Concept Papers 9/1/2016

This FOA solicits proposals to initiate and sustain the RIME-MII as part of the National Network for Manufacturing Innovation (NNMI) program. The DOD to-date has awarded six institutes:
(1) "America Makes - The National Additive Manufacturing Innovation Institute" in 2012;

(2) Lightweight and Modern Metals Manufacturing, now referred to as Lightweight Innovations for Tomorrow (LIFT), and
(3) Digital Manufacturing and Design Innovation, both established in February 2014;
(4) Integrated Photonics MII, now referred to as AIM Photonics, established in July 2015;
(5) Flexible Hybrid Electronics, now referred to as NextFlex, established in August 2015, and
(6) Revolutionary Fibers and Textiles, now referred to as Advanced Functional Fabrics Of America (AFFOA), established in April 2016.

This FOA is for one of two planned DoD-led Institutes planned for award in FY17. The anticipated seventh DoD-led Institute, focused on Advanced Tissue Biofabrication, is under solicitation. The RIME-MII will be the eighth DoD-led Manufacturing Innovation Institute. These Manufacturing Innovation Institutes (MII) bring together industry, institutions of higher education (four-and two-year universities, community colleges, technical institutes, etc.), and federal and state agencies to accelerate innovation by investing in industrially relevant manufacturing technologies with broad applications. These MIIs help bridge the gap between basic/early research and product development by developing and scaling critical technologies in the manufacturing readiness level 4 to 7 ranges. In addition to facilitating robust applied manufacturing research and development (R&D), these MIIs provide shared assets to help companies - particularly small manufacturers - access cutting-edge capabilities and equipment. They also can create an unparalleled environment to educate and train students and workers in advanced manufacturing skills. Each Institute is to have a specific technical and market focus, serving as a regional hub of manufacturing excellence, providing the critically important infrastructure necessary to create a dynamic, highly collaborative environment spurring manufacturing technology innovations and technology transfer leading to domestic production scale-up and commercialization. Each established MII represents a public-private partnership and a key part of the National Network for Manufacturing Innovation (NNMI) network of institutes. The objective of this FOA is to select an award recipient to establish a Robots in Manufacturing Environments Manufacturing Innovation Institute (RIME-MII). This RIME-MII will accelerate research, development and demonstration in the application of collaborative robotic technologies in the manufacturing environment. The use of robotics is becoming widespread in manufacturing environments but the robots are typically expensive, singularly purposed, challenging to reprogram, and require isolation from humans for safety. Robotics are increasingly necessary to achieve the level of precision necessary for defense and other industrial manufacturing requirements which limits the participation of mid-size to small manufacturers due to capital cost and complexity of use. What is needed are smart, perceptive, collaborative robots which can perform multiple tasks efficiently and with great precision and be quickly repurposed. They also need to be available at a cost which makes them accessible for small to medium sized businesses. Different elements of the desired robotic capabilities are under development in the private sector but there is limited coordination to bring these disparate elements together within a larger community with common standards to promote integration. Progress is also hampered by the fragmented nature of the current robotic technology base, proprietary intellectual property, and a lack of resources for applied research and development. The RIME-MII should enable the rapid scale-up and affordable manufacture of technologies that could enable and expand the market for robot platforms themselves. Currently, both the recurring and non-recurring cost of many robot platforms remain high due to the: complexity of

research and development needed to enable unique robotic technology, a lack of innovation, small economies of scale, and a lack of market pressure to rapidly reduce production costs over time. These platforms lack price elasticity due to customized designs. The RIME-MII will integrate the diverse collection of industry practices and institutional knowledge across many disciplines (sensor technologies, the development of end-effector technologies, software development and artificial intelligence, materials science, human and machine behavior modeling, and quality assurance) to realize the promises of a robust manufacturing innovation ecosystem. **W911NF-16-R-0028**

- **URL:** *http://www.grants.gov/web/grants/view-opportunity.html?oppId=286551*

Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (QuBBD)
National Science Foundation (NSF)
Due Date: 9/28/2016

Recent advances in medical and healthcare technologies are creating a paradigm shift in how medical practitioners and biomedical researchers approach the diagnosis, prevention, and treatment of diseases. New imaging technologies, advances in genetic testing, and innovations in wearable and/or ambient sensors are allowing researchers to predict health outcomes and develop personalized treatments or interventions. Coupled with the rapid growth in computing and infrastructure, researchers now have the ability to collect, store, and analyze vast amounts of health- and disease-related data from biological, biomedical, behavioral, social, environmental, and clinical studies. The explosion in the availability of biomedical big data from disparate sources, and the complex data structures including images, networks, and graphs, pose significant challenges in terms of visualization, modeling, and analysis. While there have been some encouraging developments related to foundational mathematical, statistical, and computational approaches for big data challenges over the past decade, there have been relatively few opportunities for collaboration on challenges related to biomedical data science. The National Science Foundation (NSF) and the National Institutes of Health (NIH) recognize that fundamental questions in basic, clinical, and translational research could benefit greatly from multidisciplinary approaches that involve experts in quantitative disciplines such as mathematics, statistics, and computer science. The Quantitative Approaches to Biomedical Big Data Program is designed to support research that addresses important application areas at the intersection of the biomedical and data sciences by encouraging inter- and multi-disciplinary collaborations that focus on innovative and transformative approaches to address these challenges. **NSF 16-573**

- **URL:** *http://www.nsf.gov/pubs/2016/nsf16573/nsf16573.htm*

Biophotonics
National Science Foundation (NSF)
Due Date: 10/20/2016

The goal of the **Biophotonics** program is to explore the research frontiers in photonics principles, engineering and technology that are relevant for critical problems in fields of medicine, biology and biotechnology. Fundamental engineering research and innovation in photonics is required to lay the foundations for new technologies beyond those that are mature and ready for application in medical diagnostics and therapies. Advances are needed in nanophotonics, optogenetics, contrast and targeting agents, ultra-thin probes, wide field imaging, and rapid biomarker screening. Low cost and minimally invasive medical diagnostics and therapies are key motivating application goals. **PD 16-7236**
Research topics in this program include:

- **Macromolecule Markers**: Innovative methods for labeling of macromolecules. Novel compositions of matter. Methods of fabrication of multicolor probes that could be used for marking and detection of specific pathological cells. Pushing the envelope of optical sensing to the limits of detection, resolution, and identification.
- **Low Coherence Sensing at the Nanoscale**: Low coherence enhanced backscattering (LEBS). N-dimensional elastic light scattering. Angle-resolved low coherence interferometry for early cancer detection (dysplasia).
- **Neurophotonics**: Studies of photon activation of neurons at the interface of nanomaterials attached to cells. Development and application of biocompatible photonic tools such as parallel interfaces and interconnects for communicating and control of neural networks.
- **Micro- & Nano-photonics**: Development and application of novel nanoparticle fluorescent quantum-dots. Sensitive, multiplexed, high-throughput characterization of macromolecular properties of cells. Nanomaterials and nanodevices for biomedicine.
- **Optogenetics**: Novel research in employing light-activated channels and enzymes for manipulation of neural activity with temporal precision. Utilizing nanophotonics, nanofibers, and genetic techniques for mapping and studying in real-time physiological processes in organs such as the brain and heart.

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505337&WT.mc_id=USNSF_25&WT.mc_ev=click*

Biotechnology and Biochemical Engineering (BBE)
National Science Foundation (NSF)
Due Date: 10/20/2016

The BBE program supports fundamental engineering research that advances the understanding of cellular and biomolecular processes in engineering biology and eventually leads to the development of enabling technology for advanced manufacturing and/or applications in support of the biopharmaceutical, biotechnology, and bioenergy industries, or with applications in health or the environment. A quantitative treatment of biological and engineering problems of biological processes is considered vital to successful research projects in the BBE program. Fundamental to many research projects in this area is the understanding of how biomolecules, cells and cell populations interact in their environment, and how those molecular level interactions lead to changes in structure, function, phenotype, and/or behavior. The program encourages highly innovative and potentially transformative engineering research leading to novel bioprocessing and manufacturing approaches, and proposals that address emerging research areas and technologies that effectively integrate knowledge and practices from different disciplines while incorporating ongoing research into educational activities. **PD 15-1491 Major areas of interest in the program include:**

- Metabolic engineering and synthetic biology for biomanufacturing
- Quantitative systems biotechnology
- Tissue engineering and stem cell culture technologies
- Protein engineering & design
- Single cell dynamics and modeling
- Development of novel "omics" tools for biotechnology applications

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501024&org=NSF&sel_org=NSF&from=fund*

Catalysis and Biocatalysis
National Science Foundation (NSF)
Due Date: 10/20/0216

The goal of the Catalysis and Biocatalysis program is to advance research in catalytic engineering science and promote the development of catalytic materials and reactions that are of benefit to society. Research in this program should focus on new basic understanding of catalytic materials and reactions, utilizing synthetic, theoretical, and experimental approaches. Target applications include fuels, specialty and bulk chemicals, environmental catalysis, biomass conversion to fuels and chemicals, conversion of greenhouse gases, and generation of solar hydrogen, as well as efficient routes to energy utilization. Heterogeneous catalysis and biocatalysis represent the main thrusts of the program.

Proposals related to both gas-solid and liquid-solid heterogeneous catalysis are welcome, as are proposals that incorporate concepts from homogeneous catalysis. Biocatalysis proposals should focus on enzymatic catalysis involving engineering of the active site involved in substrate conversion. Projects that are interdisciplinary in nature may be jointly funded with other CBET and NSF programs. **PD 15-1401 Topic areas that are of particular interest include:**

- Renewable energy-related catalysis (including applications related to biocatalysis,biomass refining, electrocatalysis, and photocatalysis).
- Catalysis aimed at closing the carbon cycle (especially conversion of CO2, methane, and natural gas to fuels and chemical intermediates).
- Catalytic alternatives to traditionally non-catalytic reaction processes, as well as new catalyst designs for established catalytic processes.
- Environmental catalysis (including energy-efficient and green routes to fuels and chemicals).
- Catalytic remediation of feedstocks, process streams, products, or effluents.
- Commercially scalable methods of catalyst synthesis.
- New catalytic materials and architectures (especially those substituting earth-abundant materials for precious and noble metal catalysts).
- Basic understanding of catalytic materials, reaction pathways, kinetics, and surface mechanisms.
- Durable, poison-resistant, and easily regenerable catalyst formulations and designs.
- Advances in tools for catalyst characterization and theoretical/computational catalysis.

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13360&org=NSF&sel_org=NSF&from=fund*

Combustion and Fire Systems
National Science Foundation (NSF)
Due Date: 10/20/2016

The goal of the Combustion and Fire Systems program is to generate cleaner global and local environments, enhance public safety, improve energy and homeland security, and enable more efficient energy conversion and manufacturing. The program endeavors to create fundamental scientific knowledge and engineering solutions that are needed to develop useful combustion applications and for mitigating the effects of fire. The program aims to identify and understand the controlling basic principles and use that knowledge to create predictive capabilities for designing and optimizing practical combustion devices. Additional outcomes of interest for this program include: broad-based tools – experimental, theoretical, and computational – which can be applied to a variety of problems in combustion and fire systems; science and technology for clean and efficient generation of power, both stationary and mobile; combustion science and technology for energy-efficient manufacturing; research that enables clean global and local environments (reduction in combustion

generated pollutants); enhanced public safety and homeland security through research on fire growth, inhibition and suppression; and education and training of an innovative workforce for power, transportation, and manufacturing industries. Innovative proposals outside of these specific interest areas may be considered. However, prior to submission, it is recommended that the PI contact the Program Director to avoid the possibility of the proposal being returned without review. **PD 16-1407**
Research areas of interest for this program include:

- **Basic Combustion Science**: Laminar and turbulent combustion of gas, liquid, and solid fuels in premixed, non-premixed, partially premixed, and homogeneous modes over a broad range of temperatures, pressures and length scales; burning of novel and synthetic fuels; development of predictive models and diagnostic tools.
- **Combustion Science Related to Climate Change**: Increasing efficiency and reducing pollution; production and use of renewable fuels; biomass combustion, gasification, and fast pyrolysis; technologies such as oxy-fuel combustion and chemical looping combustion for carbon sequestration.
- **Fire Prevention**: Improved understanding of fires to prevent their spread, inhibit their growth, and suppress them.

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505329&WT.mc_id=USNSF_25&WT.mc_ev=click*

Energy for Sustainability

National Science Foundation (NSF)
Due Date: 10/20/2016

The goal of the **Energy for Sustainability** program is to support fundamental engineering research that will enable innovative processes and solutions for the sustainable production of electricity and fuels, and energy storage. Processes for sustainable energy production must be environmentally benign, reduce greenhouse gas production, and utilize renewable resources. **PD 16-7644**
Current topics of interest include:

- Biomass Conversion, Biofuels & Bioenergy
- Photovoltaic (PV) Solar Energy
- Advanced Batteries for Transportation and Renewable Energy Storage

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505339&WT.mc_id=USNSF_25&WT.mc_ev=click*

Environmental Sustainability
National Science Foundation (NSF)
Due Date: 10/20/2016

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. 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. Innovative proposals outside the scope of the four core areas mentioned above may be considered. However, prior to submission, it is recommended that the PI contact the Program Director to avoid the possibility of the proposal being returned without review.
PD 16-7643 There are four principal general research areas that are supported:

- **Industrial Ecology**: Topics of interest in Industrial Ecology 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**: Topics 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 scale concerns.
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- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505338&WT.mc_id=USNSF_25&WT.mc_ev=click*

General & Age-Related Disabilities Engineering (GARDE)
National Science Foundation (NSF)
Due Date: 10/20/2016

The **General & Age Related Disabilities Engineering (GARDE)** program supports fundamental engineering research that will lead to the development of new technologies, devices, or software that improve the quality of life of persons with disabilities. Research may be supported that is directed toward the characterization, restoration, and/or substitution of human functional ability or cognition, or to the interaction of persons with disabilities and their environment. Areas of particular interest are disability-related research in neuroengineering and rehabilitation robotics. Emphasis is placed on significant advancement of fundamental engineering knowledge that facilitates transformative outcomes. We discourage applications that propose incremental improvements. Applicants are encouraged to contact the Program Director prior to submitting a proposal. GARDE no longer directly supports Undergraduate Engineering Design projects targeting the needs of people with disabilities (PwD), but will rather shift interest to supporting Research Experiences for Undergraduates (REUs) activities focused on improving the quality of life for PwD. These REUs can be funded as supplements to existing GARDE awards or by submitting proposals for REU Sites through NSF 13-542, which will be reviewed in collaboration with the Program Director for the GARDE program. We encourage those interested in supporting undergraduate student participation in active research focused on improving the quality of life of PwD to apply to the REU program following the respective solicitation guidelines. **PD 16-5342**

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505335&WT.mc_id=USNSF_25&WT.mc_ev=click*

Particulate and Multiphase Processes
National Science Foundation (NSF)
Due Date: 10/20/2016

The goal of the **Particulate and Multiphase Processes (PMP)** program is to support fundamental research on physico-chemical phenomena that govern particulate and multiphase systems, including flow of suspensions, drops and bubbles, granular and granular-fluid flows, behavior of micro- and nanostructured fluids, and self-assembly/directed-assembly processes that involve particulates. The program encourages transformative research to improve our basic understanding of particulate and multiphase processes with emphasis on research that demonstrates how particle-scale phenomena affect the behavior and dynamics of larger-scale systems. Although proposed research should focus on fundamentals, a clear vision is required that anticipates how results could benefit important applications in advanced manufacturing, energy harvesting,transport in biological systems, biotechnology, or environmental sustainability. Collaborative and interdisciplinary proposals are encouraged, especially those that involve a combination of experiment with theory or

modeling. Proposals whose main focus is on the synthesis of particles are not encouraged. **PD 16-1415**
Major research areas of interest in the program include:

- **Multiphase flow phenomena:** Dynamics of particle/bubble/droplet systems, behavior of structured fluids (colloids/ferro-fluids), granular flows, rheology of multiphase systems, and novel approaches that relate micro- and nanoscale phenomena to macroscale properties and process-level variables.
- **Particle science and technology:** Aerosols, production of particles and polymer-particle complexes with engineered properties, self-assembly, directed assembly, and template-directed assembly of particles into functional materials and devices.
- **Multiphase transport in biological systems:** Analysis of physiological processes, applications of functionalized nanostructures in clinical diagnostics and therapeutics.
- **Interfacial transport:** Dynamics of particles and macromolecules at interfaces, kinetics of adsorption and desorption of nanoparticles and surfactants and their spatial distributions at interfaces, complex molecular interactions at interfaces, formation of interfacial complexes that affect the dynamics of particles.

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505330&WT.mc_id=USNSF_25&WT.mc_ev=click*

Process Systems, Reaction Engineering and Molecular Thermodynamics
National Science Foundation (NSF)
Due Date: 10/20/2016

The goal of the **Process Systems, Reaction Engineering and Molecular Thermodynamics (PRM)** program is to advance fundamental engineering research on the rates and mechanisms of important classes of catalyzed and uncatalyzed chemical reactions as they relate to the design, production, and application of catalysts, chemical processes, biochemical processes, and specialized materials that have important impacts on society. The program seeks to advance electrochemical and photochemical processes of engineering significance or with commercial potential, design and optimization of complex chemical and biochemical processes, thermodynamic modeling and experiments that relate molecular dynamics to macroscopic properties and behavior, dynamic modeling and control of process systems and individual process units, reactive processing of polymers/ceramics/thin films, and interactions between chemical reactions and transport processes in reactive systems, for the integration of this information into the design of complex chemical and biochemical reactors. A substantial focus of the PRM program is to impact the chemical manufacturing enterprise by funding projects aimed at zero emissions and environmentally-friendly, smart manufacturing using sustainable materials. Areas that focus on reactors of all types (fuel cells,

batteries, microreactors, biochemical reactors, etc.), reactor design in general, and design and control of all systems associated with energy from renewable sources have a high priority for funding. **PD 16-1403 Proposals should focus on:**

- Chemical Reaction Engineering
- Process Design and Control
- Reactive Polymer Processing
- Molecular Thermodynamics

- **URL:***http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505324&WT.mc_id=USNSF_25&WT.mc_ev=click*

Communications, Circuits, and Sensing-Systems (CCSS)
National Science Foundation (NSF)
Due Date: 11/1/2016

The **Communications, Circuits, and Sensing-Systems (CCSS) Program** is intended to spur visionary systems-oriented activities in collaborative, multidisciplinary, and integrative engineering research. CCSS supports systems research in hardware, signal processing techniques, and architectures to enable the next generation of cyber-physical systems (CPS) that leverage computation, communication, and algorithms integrated with physical domains. CCSS supports innovative research and integrated educational activities in micro- and nano- electromechanical systems (MEMS/NEMS), communications and sensing systems, and cyber-physical systems. The goal is to design, develop, and implement new complex and hybrid systems at all scales, including nano and macro, that lead to innovative engineering principles and solutions for a variety of application domains including, but not limited to, healthcare, medicine, environmental and biological monitoring, communications, disaster mitigation, homeland security, intelligent transportation, manufacturing, energy, and smart buildings. CCSS also supports integration technologies at both intra- and inter- chip levels, new and advanced radio frequency (RF), millimeter wave and optical wireless and hybrid communications systems architectures, and sensing and imaging at terahertz (THz) frequencies. Proposals for the CCSS program may involve collaborative research to capture the breadth of expertise needed for such multidisciplinary integrative activities. ECCS will consider supporting a limited number of small team proposals of three or more Investigators from different disciplines and/or universities. **PD 16-7564**
Areas of interest include:

Hao Ling

- RF, Analog, and Mixed Signal Integrated Circuits and Systems
- RF, Microwave, Millimeter-Wave and THz Technology

- Energy-Efficient, Low-Noise, Reconfigurable Electronics
- Antennas and Wave Propagation for Communications and Sensing
- High-Fidelity Modeling and Simulation of Electronic, Photonic and Electromagnetic Systems

Chengshan Xiao

- RF/Wireless, Optical, and Hybrid Communications and Networking
- Integrated Sensing, Communication, and Computational Systems
- Spectrum Access and Spectrum Sharing, Cognitive Radio
- Signal Processing and Compressive Sampling
- Cyber Physical Systems and Security

Mona Zaghloul

- Micro, Nano, and Bio Systems (MEMS/NEMS)
- Chemical, Biological, and Physical Sensors, Sensors and Actuators, and Electronic Interfaces
- Ultra-Low Power Wearable and Implantable Sensing and Imaging Systems
- Real-Time Monitoring and Stimulation of the Brain and Other Body Functions in Natural Environments

- **URL:***https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505248&org=NSF&sel_org=NSF&from=fund*

HEALTH, LIFE & EARTH SCIENCES

AHRQ Small Research Grant Program (R03)
Agency for Healthcare Research and Quality (AHRQ)
Due Date: 10/16/2016, 2/16/2017, 6/16/2017 (standard due dates apply)

This FOA encourages Small Research Grant (R03) applications, and expresses AHRQ priority areas of interest for ongoing small research projects. The R03 grant mechanism supports different types of health services research projects including pilot and feasibility studies; secondary analysis of existing data; small, self-contained research projects; development of research methodology; and development of new research technology. **PA-15-147**

- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-15-147.html*

Research on Autism Spectrum Disorders (R01)
National Institutes of Health (NIH)
Due Date: See below for specific mechanisms (standard NIH due dates apply)

The purpose of this Funding Opportunity Announcement (FOA) is to encourage research grant applications to support research designed to elucidate the etiology, epidemiology, diagnosis, treatment, and optimal means of service delivery in relation to Autism Spectrum Disorders (ASD).

R01 (PA-16-388) Due Dates: 10/5/2016, 2/5/2017, 6/5/2017

- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-16-388.html*

R03 (PA-16-387) Due Dates: 10/16/2016, 2/16/2017, 6/16/2017

- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-16-387.html*

R21 (PA-16-386) Due Dates: 10/16/2016, 2/16/2017, 6/16/2017

- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-16-386.html*

Autism Centers of Excellence: Networks (R01)
National Institutes of Health (NIH)
Due Date: 11/17/2016 (Optional Letters of Intent due 30 days prior to application due date)

The Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) and participating Institutes invite applications for the Autism Centers of Excellence: Networks Program, hereafter termed "ACE Networks". Each ACE Network will consist of a multi-site project focusing on a specific topic of research for R01 support through this FOA. Each ACE Network will submit one R01 application that includes sub-awards to the collaborating sites. A companion FOA (RFA-HD-16-009) invites applications for ACE Centers supported by the P50 mechanism. **RFA-HD-17-008**

- **URL:** *https://grants.nih.gov/grants/guide/rfa-files/RFA-HD-17-008.html*

LIBRARIES

Laura Bush 21st Century Librarian Program (LB21)
Institute of Museum and Library Services (IMLS)
Due Date: Preliminary Proposals 9/1/2016; Full Proposals 1/13/2017

The Laura Bush 21st Century Librarian Program (LB21) supports professional development, graduate education and continuing education to help libraries and archives develop the human capital capacity they need to meet the changing learning and information needs of the American public. **We are especially interested in supporting proposals to address the following agency priorities:**

- National digital platform
- Learning in libraries

We conducted a series of IMLS Focus convenings in 2015 that identified issues in the National Digital Platform and Learning in Libraries areas, among other topics. The reports synthesizing key takeaways from this year's Focus convenings may help inform the development of projects. In particular, we wish to support academic programs, professional development and continuing education programs that address the issues raised at these convenings. These include:

- Digital services (content curation, user services, and infrastructure design & management)
- Participatory or lifelong learning services (maker spaces, learning labs, digital media studios, etc.)
- Community engagement, especially engagement that leads to broadband adoption
- Applied research that fosters meaningful connections among researchers, practitioners, and constituencies
- Mentorship, service learning, and practical models for development
- Supporting STEM learning
- Supporting projects that build capacity to embrace open-ended design challenges and proactive service developments.

The mission of the Institute of Museum and Library Services (IMLS) is to inspire libraries and museums to advance innovation, lifelong learning, and cultural and civic engagement. We provide leadership through research, policy development, and grant making. U.S. museums and libraries are at the forefront in the movement to create a nation of learners. As stewards of cultural and natural heritage with rich, authentic content, libraries and museums provide learning experiences for everyone. In FY2016, each award under this program will support one of the following three goals of the IMLS strategic plan for 2012-2016, Creating a Nation of Learners:

1. IMLS places the learner at the center and supports engaging experiences in libraries and museums that prepare people to be full participants in their local communities and our global society.

2. IMLS promotes museums and libraries as strong community anchors that enhance civic engagement, cultural opportunities, and economic vitality.
3. IMLS supports exemplary stewardship of museum and library collections and promotes the use of technology to facilitate discovery of knowledge and cultural heritage.

The goals focus on achieving positive public outcomes for communities and individuals; supporting the unique role of museums and libraries in preserving and providing access to collections and content; and promoting library, museum, and information service policies that ensure access to information for all Americans.

The four Laura Bush 21st Century Librarian Program funding categories are as follows:
1. Project Grants support fully developed projects for which needs assessments, collaboration development, feasibility analyses, prototyping, and other planning activities have been completed.
2. Planning Grants allow project teams to perform preliminary planning activities, such as analyzing needs and feasibility, solidifying collaboration, developing project work plans, or developing prototypes or proofs of concept. These activities should have the potential to lead to a full project, such as those described in Project Grants above.
3. National Forum Grants provide the opportunity to convene qualified groups of experts and key stakeholders to consider issues or challenges that are important to libraries or archives across the nation. Grant-supported meetings are expected to produce reports for wide dissemination with expert recommendations for action or research that address a key challenge identified in the proposal. The expert recommendations resulting from these meetings are intended to guide future applications to IMLS grant programs. National Forum Grant recipients are required at the end of the project to submit to us a brief whitepaper for public distribution summarizing those expert recommendations, which we will post online.
4. Research Grants support the investigation of key questions important to library or archival practice, including research to support the successful recruitment and education of the next generation of librarians. The term "research" includes systematic study directed toward fuller scientific knowledge or understanding of the subject studied. It.also includes activities involving the training of individuals in research techniques where such activities utilize the same facilities as other research and development activities and where such activities are not included in the instruction function. **LB21-FY17-1**

- **URL:** *https://www.imls.gov/grants/available/laura-bush-21st-century-librarian-program?GrantId=9*

National Leadership Grants for Libraries
Institute of Museum and Library Services (IMLS)
Due Date: Preliminary Proposals 9/1/2016 & 2/2/2017; Full Proposals 1/13/2017 & 6/1/2017

National Leadership Grants for Libraries (NLG) support projects that address challenges faced by the library and archive fields and that have the potential to advance practice in those fields. Successful proposals will generate results such as new tools, research findings, models, services, practices, or alliances that can be widely used, adapted, scaled, or replicated to extend the benefits of federal investment. **The funding categories are: Project Grant, Research Grant, Planning Grant, or National Forum Grant.** The application must designate one of these funding categories. IMLS is interested in work that will support the national digital platform: the combination of software applications, social and technical infrastructure, and staff expertise used by libraries, museums, and archives to provide online content and services to all users in the United States. Libraries have made important advancements in this area over the past 20 years, but much of that work was experimental or isolated. IMLS wants to bridge gaps between disparate pieces of the existing digital library infrastructure, for increased efficiencies, cost-savings, access and services. The program cannot support the digitization of content, or pre-digitization activities like inventorying collections. **Issues to consider may include:**

- increasing access to shared digital services for libraries and archives through existing platforms
- expanding the range, types and diversity of existing digital content available through shared infrastructure
- improving the discoverability and functionality of digital content;
- improving the interoperability, usability and community involvement of widely used open source digital library software applications;
- tackling problems facing libraries in providing digital access to users today at scale (digital stewardship, data curation, applications of linked data, and crowdsourcing); and
- addressing access to in-copyright and licensed content, including investigation of economic models.

IMLS is interested in work that builds institutional capacity, develops STEM learning, engages community and encourages partnerships to support all types of learning and inquiry, including participatory inquiry-based, and/or other forms of learning,in libraries. Competitive proposals in this category should focus on supporting and enhancing libraries' ability to make their own decisions and investments, rather than the development of learning spaces or programs in individual libraries and communities. Applicants may submit as many applications as they wish; however, the same proposal may not be submitted to IMLS under more than one category.

- **URL:** *https://www.imls.gov/grants/available/national-leadership-grants-libraries*

MLA Research, Development, and Demonstration Project Grants
Medical Library Association (MLA)
Due Date: 12/1/2016

The purpose of this grant is to provide support for research, development, or demonstration projects that will help to promote excellence in the field of health sciences librarianship and information sciences.

- **URL:** *http://www.mlanet.org/p/cm/ld/fid=302*

NEW FACULTY / INVESTIGATOR

American Fellowships: Summer/Short-Term Research Publication Grants
American Association of University Women (AAUW)
Due Date: 11/15/2016

These grants provide support to women college and university faculty to prepare research manuscripts for publication and to women independent researchers to prepare research for publication. Preference will be given to applicants whose work supports the vision of AAUW: to break through educational and economic barriers so that all women have a fair chance. Time must be available for eight consecutive weeks of final writing and editing in response to issues raised in critical reviews. The grants are designed to assist the candidate in obtaining tenure and other promotions. The grants are not for preliminary research. Activities undertaken during the grant period can include drafting, editing, or modifying manuscripts; replicating research components; responding to issues raised through critical review; and other initiatives to increase the likelihood of publication. The publication must be original and cannot be co-authored.

- **URL:** *http://www.aauw.org/what-we-do/educational-funding-and-awards/american-fellowships/af-research-publication-grants-application/*

SOCIAL & BEHAVIORAL SCIENCES

FY 2016 Countering Violent Extremism Grants
U.S. Department of Homeland Security (DHS) - Federal Emergency Management Agency (FEMA)
Due Date: 9/6/2016

The FY2016 CVE Grant Program seeks to develop new efforts and expand existing efforts at the community level to counter violent extremist recruitment and radicalization to violence by funding activities that enhance the resilience of communities being targeted by violent extremists for recruitment, provide alternatives to individuals who have started down a road to violent extremism, and that create or amplify alternative messages to terrorist/violent extremist recruitment and radicalization efforts. In addition, the CVE Grant Program seeks to develop and support efforts by U.S.-based entities that are broadly countering violent extremists' on-line recruitment efforts aimed at U.S.-based individuals. DHS seeks to support innovative and cost effective programs, projects, and activities which establishes or uses existing effectiveness measures. Awardees will collect data on their chosen performance measures so that evaluations of the program can be conducted, either by the organization or independently. Additionally, DHS will assess funded projects for promising practices and make them available in a replicable form for other communities or sectors. DHS is seeking to fund activities in geographically diverse communities across the country and make awards to multiple different eligible applicant types. **DHS-16-OCP-132-00-01**

- **URL:** *http://www.grants.gov/web/grants/view-opportunity.html?oppId=285773*

The Health of Sexual and Gender Minority (SGM) Populations
National Institutes of Health (NIH)
Due Date: Standard due dates apply (varies by mechanism – see below)

The National Institutes of Health (NIH) is committed to supporting research that will increase scientific understanding of the health status of diverse population groups and thereby improve the effectiveness of health interventions and services for individuals within those groups. Priority is placed on understudied populations distinctive health risk profiles. This funding opportunity announcement (FOA) focuses on sexual and gender minority (SGM) populations, including lesbian, gay, bisexual, transgender, and intersex populations. Basic, social, behavioral, clinical, and services research relevant to the missions of the sponsoring Institutes and Centers may be proposed.

R01: PA-15-261: 10/5/2015, 2/5/2016, 6/5/2016
- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-15-261.html*

R03: PA-15-262: 10/16/2015, 2/16/2016, 6/16/2016
- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-15-262.html*

R21: PA-15-263: 10/16/2015, 2/16/2016, 6/16/2016
- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-15-263.html*

R15: PA-15-260: 10/25/2015, 2/25/2016, 6/25/2016
- **URL:** *http://grants.nih.gov/grants/guide/pa-files/PA-15-260.html*

Kempf Fund Award for Research Development in Psychobiological Psychiatry
American Psychiatric Association (APA)
Due Date: 11/17/2016

This award recognizes a senior researcher who has made a significant contribution to research on the causes and treatment of schizophrenia as both a researcher and a mentor. An award is also made to support the career development of a young research psychiatrist working in a mentor-trainee relationship with the award winner.

- **URL:** *https://www.psychiatry.org/psychiatrists/awards-leadership-opportunities/awards/kempf-fund-award*

STUDENTS

Pre- and Postdoctoral Training Awards & Medical Student Gap Year Research Training Awards
Autism Science Foundation (ASF)
Due Date: 11/18/2016

ASF invites applications from individuals interested in pursuing careers in basic and clinical research relevant to autism spectrum disorders. The proposed training must be scientifically linked to autism and may be broadened to include training in a closely related area of scientific research. ASF will consider for training purposes all areas of related basic and clinical research including but not limited to: human behavior across the lifespan (language, learning, behavior, communication, social function, motor skills & planning, epilepsy, sleep, repetitive disorders), neurobiology (anatomy, development, neuroimaging), pharmacology, neuropathology, genetics, epigenetics, genomics, epigenomics,

immunology, molecular and cellular mechanisms, studies employing model organisms and systems, and studies of treatment and service delivery. Special consideration will be given to projects focusing on gender issues in autism. This includes studies examining the female protective effect, neurobiological and neuroanatomical examination of the female autism brain, diagnostic differences and challenges in females, the female phenotype, and health and lifespan issues including vocational services and employment. ASF also invites studies focused on unaffected siblings and recurrence risk in the offspring of unaffected siblings. ASF is also interested in supporting research on the neurobiology and molecular biology of autism using post-mortem brain tissue.

- **URL:** *http://autismsciencefoundation.org/what-we-fund/apply-for-a-fellowship/*