WICHITA STATE UNIVERSITY
RESEARCH AND TECHNOLOGY TRANSFER

Funding Bulletin

August 25th, 2017 (Vol. 4, 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
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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
The Anatomy of a Patent	Sep 8	12:00 – 1:30 p.m.	405 Jardine	This workshop will review the different sections of a patent and what they mean. Inventors should understand how to read an existing patent and compare it to your invention. Learn how patent examiners view prior art and how to determine if your patent application is likely to be allowed. ***Registration is required.***
IRB Open Lab	Sep 18	10:00 – 11:30 a.m.	405 Jardine	The IRB Administrator will be holding Open Labs this fall for Faculty, Staff or Students who have questions about the new forms or about their study in general. ***This is a come and go lab with no registration required.***
Research Compliance Open Lab	Sep 20	9:00 – 11:00 a.m.	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.***
Writing Proposals & Responding to an RFP	Oct 20	12:00 – 1:30 p.m.	405 Jardine	The Office of Research is here to assist you to improve your grant-writing skills. Come to this workshop for hands-on approaches to improving proposals and responses to Request for Proposals, for a variety of funders. ***Registration is required.***
NIH On-Demand Webinars – Meet the Experts	Nov 15	12:00 – 1:30 p.m.	405 Jardine	The National Institutes of Health (NIH)'s Center for Scientific Review provides helpful webinars on applying for NIH grant opportunities. Come and learn about NIH's grants review process, early career review program, and the R15 AREA (Academic Research Enhancement Awards) program, which provides funding for small-scale research projects for institutions that have not received major NIH support. The goals of the AREA program are to 1) support meritorious research, 2) expose students to research and 3) strengthen the research environment of the institution. *Presenter: n/a – NIH Webinars.* ***Registration is required.***

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NOTICES

Funding Bulletin Survey – your feedback is appreciated!

The Office of Research has created a short survey to gage user satisfaction for our Funding Bulletin; please take a couple minutes to tell us your thoughts about it. Participation is confidential and optional; results will be utilized to evaluate customer satisfaction with funding search support. Your feedback is appreciated! Please follow the link below to access the survey:

https://wichitastate.co1.qualtrics.com/jfe/form/SV_9AHfbwsfnD8Y6a1

Curious to see who's receiving external funding on campus?!? Check out the Office of Research's Monthly Awards

http://webs.wichita.edu/?u=wsuresearchadmin&p=/researchmonthlyawards/jan17/

State of Kansas Request for Proposal Distribution List

The Office of Research is developing an email list of PI's interested in receiving notifications on upcoming State of Kansas Request for Proposal opportunities. These opportunities are often limited to 1 submission per institution, and have quick turn-around deadlines. If you are interested in being added to our notification list, please email proposals@wichita.edu and include your areas of interest.

INTERNAL OPPORTUNITIES

The next available internal opportunities will be: 1) Multi-disciplinary Research Projects Award (MURPA) and 2) University Research/Creative Award (URCA) - Round 2. Both will have October 6th, 2017 deadlines.

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

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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 Notice of Intent (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 *eight* open limited submission competitions:**

(1) Higher Education Grant Program

Procter & Gamble Company (P&G)

Due Date: Internal NOIs 9/8/2017; Applications 9/30/2017 (Cycle 1)
Internal NOIs 2/2/2018; Applications 2/28/2018 (Cycle 2)

The Procter & Gamble Fund Higher Education Grant Program has been established to provide support for efforts of regionally accredited U.S. colleges and universities that will better prepare students for success in business. Grants will be provided for specific projects or programs, not for operating support. Examples of eligible projects include, but are not limited to:
- Improving curriculum to be at the cutting edge in relevance and effectiveness;
- Fostering and enabling leadership opportunities and learning;
- Creating a learning environment that encourages and enhances innovation and creativity;
- Strengthening diversity in thought, participation and ongoing interaction.

In fairness to all participating institutions, there is a limit of two applications per discipline (i.e., two applications from the School of Business, two applications from the School of Engineering, etc.).

- **URL:** *http://www.pg.com/en_US/sustainability/social_responsibility/grant_application.shtml*

(2) Research Experiences for Teachers (RET) in Engineering and Computer Science

National Science Foundation (NSF)

Due Date: Internal NOI 9/8/2017; Full Proposals 10/10/2017

The Directorate for Engineering (ENG) and the Directorate for Computer and Information Science and Engineering (CISE), have joined to support the Research Experiences for Teachers (RET) in Engineering

and Computer Science program. This program supports active long-term collaborative partnerships between K-12 Science, Technology, Engineering, Computer and Information Science, and Mathematics (STEM) teachers and community college and university faculty and students to bring knowledge of engineering or computer and information science and engineering as well as technological innovation to pre-college/community college classrooms. The goal of these partnerships is to enable K-12 STEM teachers and community college faculty to translate their research experiences and new knowledge gained in university settings into their classroom activities. The university team will include faculty, graduate and undergraduate students as well as industrial advisors. Involvement of graduate students in support of academic-year classroom activities is particularly encouraged. Partnerships with inner city, rural or other high needs schools are especially encouraged, as is participation by underrepresented minorities, women, and persons with disabilities. As part of the long-term partnership arrangements, university undergraduate/graduate students will partner with pre-college/community college faculty in their classrooms during the academic year to help teach engineering/computer science concepts. This announcement features two mechanisms for support of in-service and pre-service K-12 STEM teachers and community college faculty: (1) RET supplements to ongoing ENG and CISE awards and (2) new RET Site awards. RET supplements may be included outside this solicitation in proposals for new or renewed NSF Directorate for Engineering (ENG) and Directorate for Computer and Information Science and Engineering (CISE) grants or as supplements to ongoing NSF ENG and CISE funded projects. RET in Engineering and Computer Science Sites, through this solicitation, are based on independent proposals from engineering or computer and/or information science departments, schools or colleges to initiate and conduct research participation projects for K-12 STEM teachers and/or community college faculty. **NSF 17-575** ***Three Site proposals may be submitted per competition by a U.S. academic institution, including a College/Department of Engineering, Engineering Technology, or Computer and/or Information Science as the lead institution. No more than two of the three proposals may have an engineering focus and only one of the three proposals may have a computer and/or information science focus.***

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17575/nsf17575.htm*

(3) Innovations in Graduate Education (IGE) Program

National Science Foundation (NSF)

Due Date: Internal NOIs 9/29/2017; Full Proposals 10/25/2017

The Innovations in Graduate Education (IGE) program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. The program seeks proposals that explore ways for graduate students in research-based masters and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended

to generate the knowledge required for their customization, implementation, and broader adoption. The program supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches. The program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. Strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged. **NSF 17-585**

An eligible organization may participate in two Innovations in Graduate Education proposals per competition. Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal.

- **URL:***https://www.nsf.gov/pubs/2017/nsf17585/nsf17585.htm?WT.mc_id=USNSF_25&WT.mc_ev=click*

(4) Population Dynamics Centers Research Infrastructure Program (P2C)

National Institutes of Health (NIH) - Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

Due Date: Internal NOIs 9/29/2017; Letter of Intent 10/28/2017; Application 11/27/2017

The goal of this funding opportunity announcement (FOA) is to advance the field of population dynamics research by increasing research impact, innovation, and productivity; developing junior scientists; and maximizing the efficiency of research support. **RFA-HD-18-013** ***Only one application per institution is allowed.***

- **URL:** *https://grants.nih.gov/grants/guide/rfa-files/RFA-HD-18-013.html*

(5) Advancing Informal STEM Learning (AISL)

National Science Foundation (NSF)

Due Date: Internal NOIs 9/8/2017; Full Proposals 11/6/2017

The **Advancing Informal STEM Learning** (AISL) program seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; advance innovative research on and assessment of STEM learning in informal environments; and engage the public of all ages in learning STEM in informal environments. The AISL program supports six types of projects: (1) Pilots and Feasibility Studies, (2) Research in Service

to Practice, (3) Innovations in Development, (4) Broad Implementation, (5) Literature Reviews, Syntheses, or Meta-Analyses, and (6) Conferences. **NSF 17-573** ***An institution or organization may serve as lead on no more than three (3) proposals submitted to the November deadline. However, an institution or organization may partner as a subaward on other proposals submitted.***

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17573/nsf17573.htm*

(6) CISE Research Infrastructure (CRI)

National Science Foundation (NSF)

Due Date: Internal NOI 10/6/2017; Preliminary Proposals 11/2/2017; Full Proposals 1/11/2018

The CISE Research Infrastructure (CRI) program drives discovery and learning in the core CISE disciplines of the three participating CISE divisions by supporting the creation and enhancement of world-class research infrastructure that will support focused research agendas in computer and information science and engineering. This infrastructure will enable CISE researchers to advance the frontiers of CISE research. Further, through the CRI program CISE seeks to ensure that individuals from a diverse range of academic institutions, including minority-serving and predominantly undergraduate institutions, have access to such infrastructure.

The CRI program supports two classes of awards:

Institutional Infrastructure (II) awards support the creation of new (II-NEW) CISE research infrastructure or the enhancement (II-EN) of existing CISE research infrastructure to enable world-class CISE research opportunities at the awardee and collaborating institutions.

- Community Infrastructure (CI) awards support the planning (CI-P) for new CISE community research infrastructure, the creation of new (CI-NEW) CISE research infrastructure, the enhancement (CI-EN) of existing CISE infrastructure, or the sustainment (CI-SUSTAIN) of existing CISE community infrastructure to enable world-class CISE research opportunities for broad-based communities of CISE researchers that extend well beyond the awardee institutions. Each CI award may support the operation of such infrastructure, ensuring that the awardee institution(s) is (are) well positioned to provide a high quality of service to CISE community researchers expected to use the infrastructure to realize their research goals.

A university or organization may submit no more than three Institutional Infrastructure (II) proposals per competition. There is no limit on Community Infrastructure (CI) proposals per competition. **NSF 17-581**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17581/nsf17581.htm*

(7) Faculty Grants

Lemelson Foundation - VentureWell

Due Date: Internal NOIs 10/6/2017; Applications 11/8/2017

VentureWell awards grants for the purpose of strengthening existing curricular programs and/or building new programs in invention, innovation, and entrepreneurship. Through these grant funds, VentureWell supports creative pedagogical approaches that generate student teams (E-Teams) working on technology solutions to real-world problems. One goal is for the strongest teams applying to participate in VentureWell's E-Team Program. Proposals may include plans for creating or improving an individual course, coursesequence, minor, major, certificate program, incubator, accelerator, and other co- and extra-curricular programs. Faculty grants support educational courses or programs at the intersection of invention, innovation, and entrepreneurship that lead to the creation and support of student teams. Focus areas include, but are not limited to:

- General (technology-based) entrepreneurship
- New materials
- Clean tech/renewable energy innovation
- Technologies that address poverty alleviation and basic human needs (including, but not limited to water, sanitation, healthcare, energy, agriculture, shelter)
- Tech-based entrepreneurship led by women and other underrepresented populations
- Biomedical and healthcare innovation

Limit two proposals per institution. If more than two are received, only the two received earliest will be reviewed.

- **URL:** *https://venturewell.org/facultygrants/*

(8) Louis Stokes Alliances for Minority Participation (LSAMP)

National Science Foundation (NSF)

Due Dates: *Bridges to the Doctorate (BD) Activity* Internal NOIs 10/6/2017; Full Proposal 11/3/2017

***Pre-Alliance Planning, Bridge to the Baccalaureate (B2B), STEM Pathways Impelmentation-Only Projects* Internal NOIs 10/13/2017; Full Proposal 11/17/2017**

The overall goal of the program is to assist universities and colleges in diversifying the nation's science, technology, engineering and mathematics (STEM) workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in these disciplines: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. The LSAMP program takes a comprehensive approach to student development and retention. Particular emphasis is placed on transforming undergraduate

STEM education through innovative, evidence-based recruitment and retention strategies, and relevant educational experiences in support of racial and ethnic groups historically underrepresented in STEM disciplines. The LSAMP program also supports knowledge generation, knowledge utilization, program impact and dissemination type activities. The program seeks new learning and immediate diffusion of scholarly research into the field. Under this program, funding for STEM educational and broadening participation research activities could include research to develop new models in STEM engagement, recruitment and retention practices for all critical pathways to STEM careers or research on interventions such as mentoring, successful learning practices and environments, STEM efficacy studies, and technology use. Overall, the LSAMP program provides funding to alliances that implement comprehensive, evidence-based, innovative, and sustained strategies that ultimately result in the graduation of well-prepared, highly-qualified students from underrepresented minority groups who pursue graduate studies or careers in STEM.

Project types under this program include:

1. Alliances.

Alliances are consortia of multiple degree-granting institutions. Organizations from other sectors, including informal science organizations, may be participants. Projects focus on pre-college and undergraduate recruitment and retention activities. Types of LSAMP alliances are described as follows:

a. STEM Pathways Implementation - Only Alliance Projects are five-year implementation projects available to new alliances, reconstituted alliances and existing LSAMP alliances with less than 10 years of support for evidence-based interventions that contribute to increases in STEM baccalaureate-degree production to historically underrepresented minority students.

b. STEM Pathways and Research Alliance Projects are five-year implementation and research projects available to existing LSAMP alliances with 10 or more consecutive years of LSAMP funding support. These alliances are required to incorporate a research component fully dedicated to the production of scholarly research in broadening participation.

c. Bridges to the Baccalaureate (B2B) proposals must be submitted by institutions awarding Associate-level (AA) degrees only in a STEM or STEM-related field. Four-year baccalaureate institutions that also award STEM AA or AS degrees are ineligible to serve as lead institutions for B2B proposals.

2. Bridges to the Doctorate (BD) Activity: BD projects are two-year projects eligible only to existing alliances funded 10 or more consecutive years. These projects are focused on providing post-baccalaureate fellowship support to a cohort of 12 LSAMP students for the first two years of their STEM graduate studies and providing the necessary academic and research skills that will enable them to successfully earn STEM doctoral degrees and transition into the STEM workforce.

3. Louis Stokes Regional Centers of Excellence in Broadening Participation (LSRCE). These centers can serve as regional outreach and knowledge-diffusion centers of excellence for alliance and non-alliance organizations. LSRCE's are projects that have wide latitude for design with a focus on technical assistance in the broadening participation arena, for example, and are focused on increasing the knowledge base on broadening participation topics through research, evaluation and synthesis activities. Centers do not provide direct degree production interventions or student support activities. The projects may be three or five years in duration depending on the scope of activities.

4. Pre-Alliance Planning proposals: The description for this project type is under "Other Types of Proposals or Projects" and provides additional guidance on baseline information required in the proposal.

5. Conferences and other supplemental funding opportunities are supported for existing LSAMP alliances or LSAMP institutions. Examples include the NSF-Department of Energy collaboration to provide cutting-edge research experiences to students and faculty participants. These opportunities also may be announced under Dear Colleague Letters. Conference proposals may be submitted under NSF's general proposal guidelines as unsolicited proposals.

Only one proposal may be submitted by an eligible (lead) institution. Alliances may hold only one active alliance award at a time. Institutions partnering in an alliance may not be a formal partner in more than one alliance at the same time. This eligibility applies to proposals for STEM Pathways Implementation-Only Alliances, Bridge to the Baccalaureate Alliances, and Louis Stokes STEM Pathways and Research Alliances. **NSF 17-579**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17579/nsf17579.htm*

ARTS & HUMANITIES

ACLS Collaborative Research Fellowships
American Council of Learned Societies (ACLS)
Due Date: 9/27/2017

ACLS invites applications for the ninth annual competition for ACLS Collaborative Research Fellowships, which support small teams of two or more scholars collaborating intensively on a single, substantive project in the humanities and related social sciences. The goal of the project should be a tangible research product (such as joint print or web publications) for which at least two collaborators will take credit. The program is funded by a generous grant from The Andrew W. Mellon Foundation. For the purpose of these competitions, the humanities and related social sciences include but are not limited to American studies; anthropology; archaeology; art and architectural history; classics; economics; film; geography; history; languages and literatures; legal studies; linguistics; musicology; philosophy; political science; psychology (excluding clinical or counseling psychology); religious studies; rhetoric, communication, and media studies; sociology; and theater, dance, and performance studies. Proposals in the social science fields listed above are eligible only if they employ predominantly humanistic

approaches (e.g., economic history, law and literature, political philosophy, history of psychology). Proposals in interdisciplinary and cross-disciplinary studies are welcome, as are proposals focused on any geographic region or on any cultural or linguistic group.

- **URL:** *http://www.acls.org/programs/collaborative/*

Society for the Humanities Fellowships
Cornell University Society for the Humanities
Due Date: 10/1/2017

The Society for the Humanities at Cornell University seeks interdisciplinary research projects for residencies that reflect on the philosophical, aesthetic, political, legal, ecological, religious, and cultural understandings of authority. Society for the Humanities welcomes applications from scholars and practitioners who are interested in investigating this topic from the broadest variety of international and disciplinary perspectives.

- **URL:** *http://societyhumanities.as.cornell.edu/*

Humanities Connections
National Endowment for the Humanities (NEH)
Due Date: 10/17/2017

The Humanities Connections grant program seeks to expand the role of the humanities in undergraduate education at two- and four-year institutions. Grants will support innovative curricular approaches that foster productive partnerships among humanities faculty and their counterparts in the social and natural sciences and in pre-service or professional programs (such as business, engineering, health sciences, law, computer science, and other technology-driven fields). **20171017-AKA**
Humanities Connections grants are funded at two levels: Planning and Implementation.
Planning Grants (up to twelve months) support the interdisciplinary collaboration of faculty from two or more separate departments or schools (a minimum of one in and one outside of the humanities), with the goal of designing a new, coherent curricular program or initiative. The grant gives the institution(s) the opportunity to create a firm foundation for implementing the program. Planning goals will include identifying the members of a planning committee and organizing the planning process; defining the rationale, design, and structure that would undergird a comprehensive and institutionally sustainable effort; and establishing potential scenarios for curriculum development. Institutions may draw on current short-term initiatives or curricular programs run by individual departments in this

effort. The outcome of a successful planning phase should be a project in, or ready for, the implementation stage.

Implementation grants (up to three years) support the interdisciplinary collaboration of faculty from two or more separate departments or schools (a minimum of one in and one outside of the humanities), with the implementation of a sustainable curricular program or initiative as the outcome. Implementation grant proposals must show unambiguous evidence of preceding planning work and present a defined rationale with clear intellectual and logistical objectives that are supported by institutional commitment. The grant gives applicants the opportunity to build on faculty/administrative or institutional partnerships and to develop and refine the project's intellectual content, design, and scope. For example, the applicant should be able to demonstrate potential commitments of any partners or collaborators; outline preferred approaches to curriculum building/consolidation; and explain outreach strategies that will be employed to attract students to the new educational opportunity.

- **URL:** *https://www.neh.gov/grants/education/humanities-connections-planning-grants*

Fellowships

National Humanities Center

Due Date: 10/18/2017

The Center provides an environment for individual research and the exchange of ideas. It is located in the Triangle region of North Carolina, near Chapel Hill, Durham, and Raleigh.

Most of the Center's fellowships are unrestricted. Several, however, are designated for particular areas of research, including fellowships for environmental studies, English literature, art history, Asian studies, theology, and for early-career female philosophers. The Center also invites applications from scholars in interdisciplinary fields, including African-American studies, area studies, bioethics, cultural studies, history of science and technology, film and media studies. In addition to scholars from all fields of the humanities, the Center accepts individuals from the natural and social sciences, the arts, the professions, and public life who are engaged in humanistic projects.

- **URL:** *http://nationalhumanitiescenter.org/become-a-fellow/*

Cultural Exchange Fund
Association of Performing Arts Professionals
Due Date: 10/30/2017

The Cultural Exchange Fund (CEF) is a travel subsidy program supported by The Andrew W. Mellon Foundation that assists U.S.-based APAP members in building partnerships and collaborations outside of the U.S. and to experience the work of artists from around the world in its cultural context. APAP recognizes that promoting global exchanges of artists, their work and crosscultural programs is essential to fully engage audiences and communities in the breadth and diversity of performing arts experiences. These exchanges provide an opportunity for presenting professionals to expand and deepen their knowledge of artists, traditions and cultures from around the world.

All applicants must be active members of APAP at the time of submission, and membership must extend at least one month beyond proposed travel dates.

- **URL:** *https://www.apap365.org/Programs/Funding-Opportunities/Cultural-Exchange-Fund*

Performing Arts Japan for North America
Japan Foundation
Due Date: 10/31/2017

The Japan Foundation is now accepting project proposals for PAJ touring and collaboration grants for the 2018-2019 fiscal year. The proposed project must be undertaken by professional artists. The program was started by the Japan Foundation in 1994 with the mission to establish a system for promoting Japanese performing arts in North America. The program supports the initiatives to provide geographically diverse audiences with greater exposure to Japanese performing arts. The program also encourages collaborations between Japanese and American/Canadian artists, which will further an appreciation of Japanese culture when presented to audiences in the United States and Canada.

The primary objectives of the program are:
- to increase access to the Japanese performing arts in the United States and Canada, especially outside major metropolitan areas;
- to foster an understanding of the Japanese performing arts by providing educational programs for audiences in each touring location apart from public performances; and
- to support collaborative projects between Japanese and American/Canadian performing artists.

- **URL:** *http://www.jfny.org/arts_and_culture/paj.html*

NEA Literature Fellowships: Translation Projects, FY2019
National Endowment for the Arts (NEA)
Due Date: 12/5/2017

Program Description Through fellowships to published translators, the National Endowment for the Arts supports projects for the translation of specific works of prose, poetry, or drama from other languages into English. We encourage translations of writers and of work that are not well represented in English translation. All proposed projects must be for creative translations of literary material into English. The work to be translated should be of interest for its literary excellence and value. Priority will be given to projects that involve work that has not previously been translated into English. **2018NEA03LFTP**

- **URL:** *https://www.arts.gov/grants-individuals/translation-projects*

Ezra Jack Keats Book Award
University of Southern Mississippi (USM) - McCain Library and Archives - de Grummond Children's Literature Collection
Due Date: 12/15/2017

Known collectively as the Ezra Jack Keats Book Award, the New Writer Award was established in 1985 and the New Illustrator Award in 2001 to recognize and encourage emerging talent in the field of children's books. Many past winners have gone on to distinguished careers, creating books beloved by parents, children, librarians and teachers around the world. The EJK Book Award is given annually to an outstanding new writer and new illustrator by the Ezra Jack Keats Foundation. An Honor Books category was added in 2012. A distinguished selection committee of early childhood education specialists, librarians, illustrators and experts in children's literature reviews the entries, seeking books that portray the universal qualities of childhood, a strong and supportive family, and the multicultural nature of our world. The EJK Book Award was co-presented by the New York Public Library from 1986 to 2011. Since 2012, the de Grummond Children's Literature Collection has co-presented the award at the Children's Book Festival, held in April at the University of Southern Mississippi, in Hattiesburg. Books that have not already received awards will be given preference. To be eligible for the next award presentation in April 2017, books must have a 2016 copyright date.
1. Ezra Jack Keats New Writer Award: The intent of the New Writer Award is to identify and encourage early talent. This award is given for distinguished writing and text, not for illustration.
2. Ezra Jack Keats New Illustrator Award: The intent of the New Illustrator Award is to identify and encourage early talent. This award will be given for distinguished artwork that creatively and skillfully embodies the essence of the story or text.

- **URL:** *http://www.ezra-jack-keats.org/h/about-the-ezra-jack-keats-book-award/*

Individual Support Grants
Gottlieb Foundation, Inc., Adolph & Esther
Due Date: 12/15/2017

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:** *https://www.gottliebfoundation.org/individual-support-grant-1/*

Access to Historical Records: Major Initiatives
National Archives and Records Administration (NARA)
Due Date: Preliminary Proposals 1/18/2018; Full Proposals 7/11/2018

The National Historical Publications and Records Commission seeks projects that will significantly improve public discovery and use of major historical records collections. All types of historical records are eligible, including documents, photographs, born-digital records, and analog audio and moving images. **Projects may:**

- Digitize historical records collections, or related collections, held by a single institution and make them freely available online
- Create new freely-available virtual collections drawn from historical records held by multiple institutions
- Provide access to born-digital records
- Create new tools and methods for users to access records

The NHPRC welcomes collaborative projects, particularly for bringing together related records from multiple institutions. Projects that address significant needs in the field and result in replicable and scalable approaches will be more competitive. We also encourage organizations to actively engage the public in the work of the project. **MAJOR-201807, PRELIM-201801**

- **URL:** *https://www.archives.gov/nhprc/announcement/major.html*

Lotte Lenya Competition
Weill Foundation for Music, Inc., Kurt
Due Date: 1/22/2018

The Competition recognizes talented singer/actors of all nationalities, ages 19-32, who are dramatically and musically convincing in repertoire ranging from opera/operetta to contemporary Broadway scores, including the works of Kurt Weill.

Contestants must prepare four selections, total duration not to exceed 15 minutes:
- A selection from the operatic or operetta repertoire;
- A theatrical selection (any genre) by Kurt Weill;
- A song from the "Golden Age" (pre-1968) American musical theater repertoire; and
- A song from the American musical theater repertoire of 1968 or later.

- **URL:** *http://www.kwf.org/pages/llc-guidelines.html*

EDUCATION

EHR Core Research (ECR)
National Science Foundation (NSF)
Due Date: 9/14/2017

The EHR Core Research (ECR) program of fundamental research in STEM education provides funding in critical research areas that are essential, broad and enduring. EHR seeks proposals that will help synthesize, build and/or expand research foundations in the following focal areas: STEM learning, STEM learning environments, STEM workforce development, and broadening participation in STEM. The ECR program is distinguished by its emphasis on the accumulation of robust evidence to inform efforts to (a) understand, (b) build theory to explain, and (c) suggest interventions (and innovations) to address persistent challenges in STEM interest, education, learning, and participation. The program supports advances in fundamental research on STEM learning and education by fostering efforts to develop foundational knowledge in STEM learning and learning contexts, both formal and informal, from

childhood through adulthood, for all groups, and from the earliest developmental stages of life through participation in the workforce, resulting in increased public understanding of science and engineering. The ECR program will fund fundamental research on: human learning in STEM; learning in STEM learning environments, STEM workforce development, and research on broadening participation in STEM. **NSF 15-509**

- **URL:** *https://www.nsf.gov/pubs/2015/nsf15509/nsf15509.htm*

Discovery Research PreK-12 (DRK-12)
National Science Foundation (NSF)
Due Date: 11/14/2017, 11/14/2018

The Discovery Research PreK-12 program (DRK-12) seeks to significantly enhance the learning and teaching of science, technology, engineering, mathematics and computer science (STEM) by preK-12 students and teachers, through research and development of STEM education innovations and approaches. Projects in the DRK-12 program build on fundamental research in STEM education and prior research and development efforts that provide theoretical and empirical justification for proposed projects. Projects should result in research-informed and field-tested outcomes and products that inform teaching and learning. Teachers and students who participate in DRK-12 studies are expected to enhance their understanding and use of STEM content, practices and skills. The DRK-12 program invites proposals that address immediate challenges that are facing preK-12 STEM education as well as those that anticipate radically different structures and functions of preK-12 teaching and learning. The DRK-12 program has three major research and development strands: (1) Assessment; (2) Learning; and (3) Teaching. The program recognizes the synergy among the three strands and that there is some overlap and interdependence among them. However, proposals should identify a clear focus of the proposed research efforts (i.e., assessment, learning, or teaching) consistent with the proposal's main objectives and research questions. The program supports five types of projects: (1) Exploratory, (2) Design and Development, (3) Impact, (4) Implementation and Improvement, and (5) Conferences and Syntheses. All five types of projects apply to each of the three DRK-12 program strands. **NSF 17-584**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17584/nsf17584.htm*

Alliances for Graduate Education and the Professoriate (AGEP)
National Science Foundation (NSF)
Due Date: 12/8/2017

The Alliances for Graduate Education and the Professoriate (AGEP) program seeks to advance knowledge about models to improve pathways to the professoriate and success for historically underrepresented minority doctoral students, postdoctoral fellows and faculty, particularly African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders, in specific STEM disciplines and/or STEM education research fields. New and innovative models are encouraged, as are models that reproduce and/or replicate existing evidence-based alliances in significantly different disciplines, institutions, and participant cohorts. The AGEP program goal is to increase the number of historically underrepresented minority faculty, in specific STEM disciplines and STEM education research fields, by advancing knowledge about pathways to career success. The program objectives include: To support the development, implementation and study of innovative models of doctoral education, postdoctoral training, and faculty advancement for historically underrepresented minorities in specific STEM disciplines and/or STEM education research fields; and to advance knowledge about the underlying issues, policies and practices that have an impact on the participation, transitions and advancement of historically underrepresented minorities in the STEM academy. The AGEP Transformation Alliance projects are collaborative research projects representing new strategic alliances of institutions and organizations to develop, implement, and study evidence-based models to transform doctoral education, postdoctoral training, and faculty advancement for historically underrepresented minorities in specific STEM disciplines and/or STEM education research fields. Embedded social science and education research contributes to the knowledge base about how transformational models eliminate or mitigate negative factors and promote positive policies and practices for historically underrepresented minorities. AGEP addresses academic workforce development in a broadening participation and institutional capacity building context. Strategic collaborations are encouraged with multiple academic partners, the private sector, non-governmental organizations, professional organizations, government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and other relevant STEM and/or STEM education research organizations. The AGEP program encourages project leadership by, and partnerships with, all types of minority serving institutions, such as majority minority serving institutions, historically black colleges and universities, high Hispanic enrollment institutions, tribal colleges and universities, and institutions serving native Hawaiians, native Pacific Islanders, and/or Alaskan natives. NSF 16-552

- **URL:** *https://www.nsf.gov/pubs/2016/nsf16552/nsf16552.htm*

ENGINEERING, MATHEMATICS & PHYSICAL SCIENCES

Assured Autonomy
U.S. Department of Defense (DoD) – Defense Advanced Research Projects Agency (DARPA)
Due Date: Abstracts (strongly encouraged) 9/6/2017; Proposals 10/19/2017

Notice seeking applications to improve the design, integration and verification/testing technology for continual assurance of autonomous learning-enabled cyber-physical systems to guarantee their safety and performance. **HR001117S0045**

- **URL:***https://www.fbo.gov/index?s=opportunity&mode=form&id=d1733d01a7e756d7454c0cc661e80d6a&tab=core&_cview=0*

Disruption Opportunity Special Notice: Fundamental Design (FUN DESIGN)
U.S. Department of Defense (DoD) – Defense Agency Research Projects Agency (DARPA)
Due Date: 9/11/2017 (Questions due by 9/4/2017)

Notice seeking applications to investigate new fundamental computational and mathematical building blocks to represent conceptual designs of mechanical systems and enable the generation of novel configurations through the exploration of various combinations of these design building blocks. Funds support two independent and sequential project phases: a 6-month Feasibility Study (Phase 1) and a 12-month Proof of Concept (Phase 2). **DARPA-SN-17-71**

- **URL:**https://www.fbo.gov/index?s=opportunity&mode=form&id=9f259077111153bce4737d92f86ec95e&tab=core&_cview=1

Disruption Opportunity Special Notice: Imaging Through Almost Anything, Anywhere (ITA3)
U.S. Department of Defense (DoD) – Defense Agency Research Projects Agency (DARPA)
Due Date: 9/11/2017

Notice seeking applications to determine the 3D resolution/range trade space based on the use of all pervasive low-frequency, electromagnetic waves, combined with simple computational methods to consider the general problem of imaging through metal containers, walls, ground, fog, water, and

other complex media. Funds support two independent and sequential project phases: a 6-month Feasibility Study (Phase 1) and a 12-month Proof of Concept (Phase 2). **DARPA-SN-17-72**

- **URL:***https://www.fbo.gov/index?s=opportunity&mode=form&id=4fae1c4142ecd3147b269508e77ca2e4&tab=core&_cview=0*

Innovative Natural-Gas Technologies for Efficiency Gain in Reliable and Affordable Thermochemical Electricity-Generation (INTEGRATE)
U.S. Department of Energy (DOE) - Advanced Research Projects Agency - Energy (ARPA-E)
Due Date: Concept Papers 9/11/2017

The objective of the INTEGRATE Program is to reduce the cost and increase the primary energy efficiency associated with the provision of electric power to commercial and industrial end users. In this program, ARPA-E seeks to develop natural gas-fueled distributed electric generation systems that offer fuel to electric power conversion efficiencies in excess of 70%. The INTEGRATE program will focus on hybrid system designs that integrate a fuel cell with a heat or reactive engine for ultra-high efficiency at competitive costs. This FOA seeks to encourage the development of the enabling technologies that will make these hybrid systems a reality, and a successful INTEGRATE program will provide highly flexible distributed energy technology options with unprecedented efficiency and lower emissions than today's fossil-fuel generated electricity. Furthermore, the technologies that this program seeks to develop are also expected to have broad electric-power-generation and transportation market applications. **DE-FOA-0001797**

- **URL:** *https://www.grants.gov/custom/viewOppDetails.jsp?oppId=295894*

Biomechanics and Mechanobiology (BMMB)
National Science Foundation (NSF)
Due Date: 9/15/2017

The BMMB Program supports fundamental research in biomechanics and mechanobiology. An emphasis is placed on multiscale solid and fluid mechanics approaches in the study of organisms that integrate across molecular, cell, tissue, and organ domains. The relationships between mechanical behavior and extracellular matrix composition and organization are of interest. In addition, the influence of in vivo mechanical forces on cell and matrix biology in the histomorphogenesis, maintenance, regeneration, and aging of tissues is a primary concern. Funded projects may include theoretical, computational, and experimental approaches. The program encourages the consideration of diverse living tissues as smart materials that are self-designing. **PD 17-7479**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13523*

Computational and Data-Enabled Science and Engineering (CDS&E)
National Science Foundation (NSF)
Due Date: 9/15/2017 – 12/7/2017 (Varies by Division)

The goal of the CDS&E program is to identify and capitalize on opportunities for major scientific and engineering breakthroughs through new computational and data analysis approaches. The intellectual drivers may be in an individual discipline or they may cut across more than one discipline in various Directorates. The key identifying factor is that the outcome relies on the development, adaptation, and utilization of one or more of the capabilities offered by advancement of both research and infrastructure in computation and data, either through cross-cutting or disciplinary programs. The CDS&E program is not intended to replace existing programs that make awards that involve computation and the analysis of large data sets. Rather, the CDS&E program is meant to fund awards that have a significant component of cyber development or cyber science that goes well beyond what would normally be included in these programs. PIs should ask for consideration and review as a CDS&E proposal only if the proposal addresses at least one of these additional cyber components. Any proposal submitted to the CDS&E program that does not satisfy at least one of the additional criteria listed above will be reviewed within the context of the individual program. A proposal that is requesting consideration within the context of CDS&E should begin the title with the identifying acronym "CDS&E:"
PD 12-8084

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504813*

Design of Engineering Material Systems (DEMS)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The DEMS program supports fundamental research intended to lead to new paradigms of design, development, and insertion of advanced engineering material systems. Fundamental research that develops and creatively integrates theory, processing/manufacturing, data/informatics, experimental, and/or computational approaches with rigorous engineering design principles, approaches, and tools to enable the accelerated design and development of materials is welcome. Research proposals are sought that strive to develop systematic scientific methodologies to tailor the behavior of material systems in ways that are driven by performance metrics and incorporate processing/manufacturing. While an emphasis on a specific material system may be appropriate to provide the necessary project focus, techniques developed should transcend materials systems. Ultimately it is expected that research outcomes will be methodologies to enable the discovery of materials systems with new properties and behavior, and enable their rapid insertion into engineering systems. Proposals that focus on modeling, simulation, and prediction of material performance (even when research is coupled

with experiments for validation or guidance) without an intellectual emphasis on design are not appropriate for this program and should be submitted to other disciplinary programs. **PD 12-8086**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504809*

Dynamics, Control and Systems Diagnostics (DCSD)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The Dynamics, Control and Systems Diagnostics (DCSD) program supports fundamental research on the analysis, measurement, monitoring and control of dynamic systems.
The program promotes innovation in the following areas:
Modeling: creation of new mathematical frameworks to apply tools of dynamics to physical systems
Analysis: discovery and exploration of structure in dynamic behavior
Diagnostics: dynamic methods that infer system properties from observation
Control: methods that produce desired dynamic behavior

Proposals submitted to the DCSD program should clearly identify, articulate and motivate innovative components in one or more of the foundational areas above. Furthermore, proposals should be aligned with the disciplinary thrusts of the CMMI division. To ensure that a project is appropriate for the DCSD program, PIs are very strongly encouraged to contact DCSD Program Directors prior to the full submission. Innovative research that primarily concerns electromagnetic or chemical phenomena should be directed to the ECCS or CBET divisions. The DCSD Program does not fund fundamental research relating to sensing modalities or sensor development. Proposals offering fundamental research on sensing modalities should be submitted to the Communications, Circuits and Sensing Systems (CCSS) program or the Electronics, Photonics, and Magnetic Devices (EPMD) program in the ECCS Division. **PD-17-7569**

- **URL:***https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505182&org=NSF&sel_org=NSF&from=fund*

Engineering and Systems Design (ESD)
National Science Foundation (NSF)
Due Date: 9/15/2017

The Engineering and Systems Design (ESD) program supports fundamental research leading to new engineering and systems design methods and practices for specific global contexts. In particular, ESD

seeks intellectual advances in which the theoretical foundations underlying design and systems engineering are operationalized into rigorous and pragmatic methods for a specific context. In addition, the program funds the rigorous theoretical and empirical characterization of new or existing methods for design and systems engineering, identifying in which global contexts and under which assumptions these methods are effective and efficient. Such a global context includes both a domain (such as energy systems, consumer products, cyber-physical systems) and an economic, socio-political, environmental and technological context. Application of existing design methods or tools to new domains is out of scope. Research in ESD should advance the state of knowledge of design methodology, for instance, by adapting existing methods to a new context or by carefully characterizing existing or new design methods in a new context. Research focused on the theoretical foundation of design and systems engineering in a generic, domain-independent fashion should be submitted to the Systems Science program (SYS). **PD 17-1464**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13340*

Engineering for Natural Hazards (ENH)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The Engineering for Natural Hazards (ENH) program supports fundamental research that advances knowledge for understanding and mitigating the impact of natural hazards on constructed civil infrastructure. Natural hazards considered by the ENH program include earthquakes, windstorms (such as tornadoes and hurricanes), tsunamis, storm surge, and landslides. The constructed civil infrastructure supported by the ENH program includes building systems, such as the soil-foundation-structure-envelope-nonstructural system, as well as the faÃ§ade and roofing, and other structures, geostructures, and underground facilities, such as tunnels. While research may focus on a single natural hazard, research that considers civil infrastructure performance over its lifetime in the context of multiple hazards, that is, a multi-hazard approach, is encouraged. Research may integrate geotechnical, structural, and architectural engineering advances with discoveries in other science and engineering fields, such as earth and atmospheric sciences, materials science, mechanics of materials, dynamic systems and control, systems engineering, decision theory, risk analysis, high performance computational modeling and simulation, and social, behavioral, and economic sciences. Multi-disciplinary and international collaborations are encouraged. The ENH program encourages research integrated with knowledge dissemination and activities that can lead to broader societal benefit for reducing the impact of natural hazards on civil infrastructure. **PD 17-014Y**

- **URL:***https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505177&org=NSF&sel_org=NSF&from=fund*

Manufacturing Machines and Equipment (MME)
National Science Foundation (NSF)
Due Date: 9/15/2017

The MME program supports fundamental research that enables the development of new and/or improved manufacturing machines and equipment, and optimization of their use, with a particular focus on equipment appropriate for the manufacture of mechanical and electromechanical devices, products, and systems featuring scales from microns to meters (proposals relating to nanomanufacturing should be submitted to the CMMI NanoManufacturing program, and those relating to the manufacture of electronic devices such as IC products should be submitted to the ECCS Division). Proposals relating to a wide range of manufacturing operations are encouraged, including both subtractive and additive processes, forming, bonding/joining, and laser processing. Proposals that will enable innovations in one or more of the Manufacturing USA institutes' focus areas (https://www.manufacturing.gov/nnmi-institutes/) and leverage the facilities, infrastructure and member companies of an institute, are also encouraged. Competitive projects will propose hypothesis-driven research that advances the frontiers of knowledge in relevant areas. Proposals submitted to the MME program should include a clearly articulated research (not developmental) objective and a coherent plan to accomplish the stated objective. Both experimental and theoretical work are supported. The Project Description must contain, as a separate section within the narrative, a section labeled "Broader Impacts." **PD 17-1468**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13346*

Materials Engineering and Processing (MEP)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The Materials Engineering and Processing (MEP) program supports fundamental research addressing the processing and mechanical performance of engineering materials by investigating the interrelationship of materials processing, structure, properties and/or life-cycle performance for targeted applications. Materials processing proposals should focus on manufacturing processes that convert material into useful form as either intermediate or final composition. These include processes such as extrusion, molding, casting, deposition, sintering and printing. Proposed research should include the consideration of cost, performance, and feasibility of scale-up, as appropriate. Novel processes for the production of nanoscale materials (nanotubes, nanocrystals, etc.) are of interest. Process optimization studies without a fundamental scientific contribution are not supported. **PD 17-8092**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504950*

Mechanics of Materials and Structures (MOMS)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The Mechanics of Materials and Structures program supports fundamental research in mechanics as related to the behavior of deformable solid materials and respective structures under internal and external actions. A diverse and interdisciplinary spectrum of research is supported with emphasis on research that leads to advances in i) theory, experimental, and/or computational methods in mechanics, and/or ii) uses contemporary mechanics methods to address modern challenges in materials and structures. Proposed research can focus on existing or emerging materials and structural systems, across time and length scales. Proposals related to material response are welcome, and would propose, but not limited to, advances in fundamental understanding of deformation, fracture, fatigue, as well as on contact and friction through constitutive modeling, multi-scale (spatial or temporal) and multi-physics analysis, computational methods, or experimental techniques. Proposals that relate to structural response are welcome and would propose, but not limited to, advances in the understanding of nonlinear deformation, instability and collapse in the context of large deformation, wave propagation, multi-scale (spatial or temporal) and multi-physics analysis, computational methods, or experimental techniques. Proposals at the intersection or considerate of the integration of material and structure (such as, but not limited to, metamaterials, hierarchical, microarchitectured and low-dimensional materials) are especially welcome. Of particular interest are research questions that address the integration and combination of geometry, topology of material distributions, lengthscales and deformation/failure mechanics. Within this context, the challenge of the notion of what constitutes a "material" or a "structure" is expected to lead to unique opportunities in terms of analysis and experimentation of novel response characteristics. **PD 17-1630**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13355*

Mind, Machine and Motor Nexus (M3X)
National Science Foundation (NSF)
Due Date: 9/15/2017

The Mind, Machine and Motor Nexus (M3X) program supports fundamental research at the intersection of mind, machine and motor. A distinguishing characteristic of the program is an integrated treatment of human intent, perception, and behavior in interaction with embodied and intelligent engineered systems and as mediated by motor manipulation. M3X projects should advance the holistic analysis of cognition and of embodiment as present in both human and machine elements. This work will encompass not only how mind interacts with motor function in the manipulation of machines, but also how, in turn, machine response and function may shape and influence both mind and motor function. The M3X program seeks to support the development of theories, representations, and

working models that draw upon and contribute to fundamental understanding within and across diverse fields, including but not limited to systems science and engineering; mechatronics; cognitive, behavioral and perceptual sciences; and applied computing. Research funded through this program is expected to lead to new computable theories and to the physical manifestation of these theories. Application areas supported by the M3X program span the full breadth of the Division of Civil, Mechanical and Manufacturing Innovation. Methodological innovation is emphasized, as is a focus on engaging new and emerging thematic areas. The M3X program does not support disaggregated, parallel efforts from individual disciplines or investigators: rather, supported activities must strongly integrate across disciplines to enable discoveries that would not otherwise be possible. Additionally, the M3X program will not consider proposals that do not integrate physical considerations in a fundamental way. Principal investigators proposing pure artificial intelligence or pure machine learning research are referred to funding opportunities in the Directorate for Computer and Information Science and Engineering. **PD-17-058Y**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505402*

Nanomanufacturing (NM)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

Nanomanufacturing is the production of useful nano-scale materials, structures, devices and systems in an economically viable manner. The NSF Nanomanufacturing Program supports fundamental research in novel methods and techniques for batch and continuous processes, top-down (addition/subtraction) and bottom-up (directed self-assembly) processes leading to the formation of complex heterogeneous nanosystems. The program supports basic research in nanostructure and process design principles, integration across length-scales, and system-level integration. The Program leverages advances in the understanding of nano-scale phenomena and processes (physical, chemical, electrical, thermal, mechanical and biological), nanomaterials discovery, novel nanostructure architectures, and new nanodevice and nanosystem concepts. It seeks to address quality, efficiency, scalability, reliability, safety and affordability issues that are relevant to manufacturing. To address these issues, the Program encourages research on processes and production systems based on computation, modeling and simulation, use of process metrology, sensing, monitoring, and control, and assessment of product (nanomaterial, nanostructure, nanodevice or nanosystem) quality and performance. The Program seeks to explore transformative approaches to nanomanufacturing, including but not limited to: micro-reactor and micro-fluidics enabled nanosynthesis, bio-inspired nanomanufacturing, manufacturing by nanomachines, additive nanomanufacturing, hierarchical nanostructure assembly, continuous high-rate nanofabrication such as roll-to-roll processing or massively-parallel large-area processing, and modular manufacturing platforms for nanosystems. The Program encourages the fabrication of nanomaterials by design, three-dimensional nanostructures,

multi-layer nanodevices, and multi-material and multi-functional nanosystems. Also of interest is the manufacture of dynamic nanosystems such as nanomotors, nanorobots, and nanomachines, and enabling advances in transport and diffusion mechanisms at the nano-scale. The program supports education of the next generation of researchers, and encourages building a workforce trained in nanomanufacturing systems. It is also interested in understanding long-term environmental, health and societal (EHS) implications of large-scale production and use of nano-scale materials, devices and systems. Individual and small group proposals are encouraged to partner with industry and government sponsored laboratories. Proposers are referred to NSF GOALI program for collaborative efforts with industry. NSF contributes fundamental research in support of the NNI's Signature Initiative on Sustainable Nanomanufacturing. The Nanomanufacturing Program does not support research that focuses on synthesis and characterization of nanomaterials and nanostructures, or the processing, compounding, and manufacture of nanomaterials and nanostructures in bulk quantities. Proposals in these areas should be directed to the appropriate NSF program. **PD 17-1788**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13347*

Structural and Architectural Engineering and Materials (SAEM)
National Science Foundation (NSF)
Due Date: 9/15/2017

The overall goal of the Structural and Architectural Engineering and Materials (SAEM) program is to enable sustainable buildings and other structures that can be continuously occupied and/or operated during the structure's useful life. The SAEM program supports fundamental research for advancing knowledge and innovation in structural and architectural engineering and materials that promotes a holistic approach to analysis and design, construction, operation, maintenance, retrofit, and repair of structures. For buildings, all components including the foundation-structure-envelope (the faÃ§ade, curtain-wall and roofing) and interior systems, are of interest to the program. Research in new engineering concepts and design paradigms for buildings that have significantly reduced dependence and interdependence on municipal infrastructure through, for example, self-hydrating (closed-loop water system) and self-heating-cooling-ventilating (energy usage) is encouraged. In addition, the program targets research in the building systems that are reconfigurable for rapid construction, disassembly and disposal, are reliable and resilient, and are less complex. Research topics of interest for sustainable structures include the following: strategies for structures that over their lifecycle are cost-effective, make efficient use of resources and energy, and incorporate sustainable structural and architectural materials; mitigation of deterioration due to fatigue and corrosion; serviceability related to large deflections and vibrations; and advances in physics-based computational modeling and simulation. Research is encouraged that integrates discoveries from other science and engineering fields, such as materials science, building science, mechanics of materials, dynamic systems and control, reliability, risk analysis, architecture, economics and human factors. The program also supports

research in sustainable foundation-structure-envelope-nonstructural systems and materials as described in the following report: National Science and Technology Council, High Performance Buildings; Final Report: Federal R & D Agenda for Net Zero Energy, High-Performance Green Buildings. Building Technology Research and Development (BTRD) Subcommittee, OSTP, U.S. Government, September 2008. Structural health monitoring that focuses on decision-making systems for civil structures is of interest; however, research for new sensor technologies and data collection should be submitted to other programs. Within this programmatic focus, materials research of interest includes fundamental investigations into new sustainable structural and architectural materials that are multifunctional and integral to lifetime serviceability of the structure, and extend beyond conventional uses of mature or current infrastructure construction materials such as concrete, steel, and masonry. Examples of research priorities are fundamental studies of biological and bio-inspired materials, materials produced from recycled materials and/or are easily recyclable, materials with low embedded carbon footprints, and smart materials that change properties in reaction to environmental changes. Parametric studies of commonly used construction materials are not appropriate for this or other CMMI programs. Materials research not specifically related to civil infrastructure should be submitted to the MEP Program in CMMI or the Division of Materials Research in the MPS Directorate. The SAEM program encourages knowledge dissemination and technology transfer activities that can lead to broader societal benefit and implementation for provision of sustainable structures. **PD 17-1637**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13358*

Systems Science (SYS)
National Science Foundation (NSF)
Due Date: 9/15/2017, 1/24/2018

The Systems Science (SYS) program supports fundamental research leading to a theoretical foundation for design and systems engineering. In particular, the Systems Science program seeks intellectual advances in which underlying theories (such as probability theory, decision theory, game theory, organizational sociology, behavioral economics or cognitive psychology) are integrated and abstracted to develop explanatory models for design and systems engineering in a general, domain-independent fashion. Ideally, the explanatory models, derived from the underlying theoretical foundations will lead to testable hypotheses. Based on collected evidence supporting or falsifying the hypotheses, new insights are gained allowing the explanatory models to be refined or updated. Systems research that does not address the *Engineering* of Systems is out of scope. Domain-specific applications of the theoretical foundations are also out of scope. Research that focuses on domain-specific applications, but simultaneously advances our fundamental understanding of design and systems engineering will be considered for co-funding with other programs (see "Related Programs" below for examples). Such proposals should be submitted to the appropriate disciplinary program, with the System Science program identified as a secondary program. **PD 17-8085**

Research topics of interest in SYS include, but are not limited to:
- Processes: Search Strategy, Guidance and Control
- Organizations: Decomposition, Communication and Incentivisation
- Modeling: Creation, Use and Assessment of Models
- Research Methodology

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504788*

EMERGING FRONTIERS IN RESEARCH AND INNOVATION 2018 (EFRI-2018)

National Science Foundation (NSF)

Due Date: Letters of Intent 9/29/2017; Preliminary Proposals 10/25/2017; Full Proposals 2/23/2018

The Emerging Frontiers in Research and Innovation (EFRI) program of the NSF Directorate for Engineering (ENG) serves a critical role in helping ENG focus on important emerging areas in a timely manner. This solicitation is a funding opportunity for interdisciplinary teams of researchers to embark on rapidly advancing frontiers of fundamental engineering research.

For this solicitation, we will consider proposals that aim to investigate emerging frontiers in the following two research areas:

- Chromatin and Epigenetic Engineering (CEE)

- Continuum, Compliant, and Configurable Soft Robotics Engineering (C3 SoRo)

This solicitation will be coordinated with the Directorate for Biological Sciences (BIO) and the Directorate for Computer and Information Science and Engineering (CISE). EFRI seeks proposals with transformative ideas that represent an opportunity for a significant shift in fundamental engineering knowledge with a strong potential for long term impact on national needs or a grand challenge. The proposals must also meet the detailed requirements delineated in this solicitation. **NSF 17-578**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17578/nsf17578.htm*

Simons Collaborations in Mathematics and the Physical Sciences

Simons Foundation

Due Date: Letters of Intent 10/3/2017; Full Proposals 2/28/2018

The aim of the Simons Collaborations in MPS program is to stimulate progress on fundamental scientific questions of major importance in mathematics, theoretical physics and theoretical computer science.

A Simons Collaboration in MPS should address a mathematical or theoretical topic of fundamental scientific importance, where a significant, new development creates a novel area for exploration or provides a new direction for progress in an established field. The questions addressed by the collaboration may be concrete or conceptual, but there should be little doubt that answering them would constitute a major scientific milestone. The project should have clearly defined initial activities and goals by which progress and success can be measured. The support from the foundation should be seen as critical for the objectives of the project. The project should involve outstanding researchers with a range of career stages. Excellence of the scientific leadership is one of the main criteria in the selection process.

- **URL:** *https://www.simonsfoundation.org/grant/simons-collaborations-in-mathematics-and-the-physical-sciences/*

Radio Frequency Machine Learning Systems (RFMLS)
U.S. Department of Defense (DoD) – Defense Agency Research Projects Agency (DARPA)
Due Date: 10/10/2017 (Questions due by 9/19/2017)

Notice seeking applications to develop the foundations for applying modern data-driven machine learning to the radio frequency spectrum domain as well as to develop practical applications in emerging spectrum problems, which demand improved discrimination performance over today's hand-engineered radio frequency systems. **HR001117S0043**

- **URL:***https://www.fbo.gov/index?s=opportunity&mode=form&id=ae1eff49d89896b9e8eb5ea4c0d549d5&tab=core&_cview=0*

Algebra and Number Theory
National Science Foundation (NSF)
Due Date: 10/13/2017

This program supports research in algebra, algebraic and arithmetic geometry, number theory, and representation theory. **PD 10-1264**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5431*

Process Separations
National Science Foundation (NSF)
Due Date: 10/20/2017

The Process Separations program is part of the Chemical Process Systems cluster, which includes also 1) Catalysis; 2) Process Systems, Reaction Engineering, and Molecular Thermodynamics; and 3) Energy for Sustainability.

The Process Separations program supports research focused on novel methods and materials for separation processes, such as those central to the chemical, biochemical, bioprocessing, materials, energy, and pharmaceutical industries. A fundamental understanding of the interfacial, transport, and thermodynamic behavior of multiphase chemical systems as well as quantitative descriptions of processing characteristics in the process-oriented industries is critical for efficient resource management and effective environmental protection. The program encourages proposals that address long standing challenges and emerging research areas and technologies, have a high degree of interdisciplinary work coupled with the generation of fundamental knowledge, and the integration of education and research.
Research topics of particular interest include fundamental molecular-level work on:
- Design of scalable mass separating agents and/or a mechanistic understanding of the interfacial thermodynamics and transport phenomena that relate to purification of gases, chemicals, or water
- Design or improvement of mass separation agents or processes that are based upon, and advance, transport principles
- Downstream purification of biologically derived chemicals for increased throughput
- Field (flow, magnetic, electrical) induced separations and other innovative approaches that address a significant reduction in energy and/or materials requirements in the process industries
PD 17-1417

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13363*

Atomic, Molecular and Optical Physics - Experiment
National Science Foundation (NSF)
Due Date: 10/25/2017

The Atomic, Molecular, and Optical Experimental Physics program (AMO-E) supports research that can be categorized by four broad, sometimes overlapping, sub-areas of the discipline: (1) Precision Measurements, (2) Ultracold Atoms and Molecules, (3) Optical Physics (including the ultrafast regime), and (4) Atomic and Molecular Spectroscopy or Collisions. Ions are included as a subset of Atoms and Molecules. The focus of research in the AMO-E program is on the fundamental quantitative understanding of atoms and molecules and their interaction with light, and the application of AMO

methods to fundamental science in other disciplines in the Division (e.g., Nuclear Physics, Gravitational Physics, and Elementary Particle Physics). Examples of activities supported directly by the AMO-E program include: quantum control, cooling and trapping of atoms and ions, low-temperature collision dynamics, the collective behavior of atoms in weakly interacting gases (Bose-Einstein condensates and dilute Fermi degenerate systems), precision measurements of fundamental constants, the effects of electron correlation on structure and dynamics, the nonlinear response of isolated atoms to intense ultra-short electromagnetic fields, atom-cavity interaction at high fields, and quantum properties of the electromagnetic field. Some AMO-related activities are supported primarily by other NSF Programs. Proposals focused on plasmas should be directed to the NSF/DOE Partnership in Basic Plasma Science and Engineering. Proposals focused on condensed matter systems should be directed to the Division of Materials Research, which contains the Condensed Matter Physics Program and the Electronic and Photonic Materials Program. Applied AMO proposals are supported by the Engineering Directorate, particularly the Electronics, Photonics, and Magnetic Devices Program. The Chemical Structure, Dynamics, and Mechanisms Program within the Chemistry Division supports proposals on molecules. Experimental and theoretical AMO proposals on Quantum Information Science should be directed to the Quantum Information and Revolutionary Computing (QIRC) program. All of these other programs coordinate the AMO aspects of their proposal portfolio closely with the AMO-E program. **NSF 17-561**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505435*

Division of Physics: Investigator-Initiated Research Projects (PHY)
National Science Foundation (NSF)
Due Date: 10/25/2017 – 12/6/2017 (depending on specific program)

The Division of Physics (PHY) supports physics research and education in the nation's colleges and universities across a broad range of physics disciplines that span scales of space and time from the largest to the smallest and the oldest to the youngest. The Division is comprised of disciplinary programs covering experimental and theoretical research in the following major subfields of physics: Accelerator Science; Atomic, Molecular and Optical Physics; Computational Physics; Elementary Particle Physics; Gravitational Physics; Integrative Activities in Physics; Nuclear Physics; Particle Astrophysics; Physics of Living Systems; Plasma Physics (supported under a separate solicitation); and Quantum Information Science. **NSF 17-561**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17561/nsf17561.htm*

Elementary Particle Physics - Experiment (EPP)
National Science Foundation (NSF)
Due Date: 10/25/2017

Particle physics plays an essential role in the broader enterprise of the physical sciences. It inspires U.S. students, attracts talent from around the world, and drives critical intellectual and technological advances in other fields. And the field is entering an era of unprecedented potential as a result of new discoveries about matter and energy in the Universe. The Particle Physics program seeks to explore the fundamental nature of matter, energy, space, and time. It asks such questions as: What are the origins of mass? What is the nature of the Higgs boson? Can the basic forces of nature be unified? How did the universe begin? How will it evolve in the future? What are dark matter and dark energy? What can we learn from discovering that neutrinos have mass? Are there extra dimensions of space-time? Formerly separate questions in cosmology (the universe on the largest scales) and quantum phenomena (the universe on the smallest scales) become connected through our understanding that the early universe can be explored through the techniques of particle physics. At the NSF, particle physics is supported by four programs within the Division of Physics: (1) the Theory program, which includes fundamental research on the forces of nature and the early history of the universe as well as support for the experimental program by providing guidance and analysis for high energy experiments; (2) the Elementary Particle Physics (EPP) program, which supports particle physics at accelerators and advances in detector development; (3) the Particle Astrophysics (PA) program, which supports non-accelerator experiments; and (4) the new Accelerator Science program which supports research at universities into the educational and discovery potential of basic accelerator physics. **NSF 17-561**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17561/nsf17561.htm*

Macromolecular, Supramolecular and Nanochemistry (MSN)
National Science Foundation (NSF)
Due Date: 10/31/2017

The MSN Program focuses on basic research that addresses fundamental questions regarding the chemistry of macromolecular, supramolecular and nanoscopic species and other organized structures and that advances chemistry knowledge in these areas. **Research of interest to this program will explore novel chemistry concepts in the following topics:**
1. The development of novel synthetic approaches to clusters, nanoparticles, polymers, and supramolecular architectures; innovative surface functionalization methodologies; surface monolayer chemistry; and template-directed synthesis.
2. The study of molecular scale interactions that give rise to macromolecular, supramolecular or nanoparticulate self-assembly into discrete structures; and the study of chemical forces and dynamics

that are responsible for spatial organization in discrete organic, inorganic or hybrid systems (excluding extended solids).

3. Investigations that utilize advanced experimental or computational methods to understand or to predict the chemical structure, unique chemical and physicochemical properties, and chemical reactivities that result from the organized or nanoscopic structures. Research in which theory advances experiment and experiment advances theory synergistically is of special interest.

Submissions that advance MSN chemistry knowledge important for addressing national needs for sustainability are of particular interest. Examples include: (1) transformative approaches to the efficient and inexpensive synthesis of recyclable polymers or polymers using renewable feedstocks; (2) innovative research to enhance our understanding of the supramolecular recognition of critical elements essential for efficient sequestration and recycling of such elements; (3) innovative research to enhance our understanding of the supramolecular chemistry important for the design and synthesis of catalysts that rival enzymes in substrate specificity, stereoselectivity, yields, and efficiency (selection or genetic engineering of enzymes or screening of combinatorial libraries of catalysts are not of interest); (4) novel chemistry of nanostructures comprised of earth abundant elements to substitute for nanostructures that contain critical elements; and (5) innovative approaches to the preparation of novel nanostructures of critical elements for efficient/sustainable use of these elements. The MSN Program encourages white paper submissions for potential EAGER proposals on highly innovative and potentially transformative ideas on these topics. Proposals for which the primary focus is on extended solids, materials research, biological properties, device properties, or engineering are not appropriate for this program, and the principal investigator is encouraged to look into corresponding programs at NSF for proposal submission. **PD 09-6885**

- **URL:** *https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503422*

Division of Materials Research: Topical Materials Research Programs (DMR-TMRP)

National Science Foundation (NSF)

Due Date: 11/1/2017

Research supported by the Division of Materials Research (DMR) focuses on advancing fundamental understanding of materials, materials discovery, design, synthesis, characterization, properties, and materials-related phenomena. DMR awards enable understanding of the electronic, atomic, and molecular structures, mechanisms, and processes that govern nanoscale to macroscale morphology and properties; manipulation and control of these properties; discovery of emerging phenomena of matter and materials; and creation of novel design, synthesis, and processing strategies that lead to new materials with unique characteristics. These discoveries and advancements transcend traditional scientific and engineering disciplines. The Division supports research and education activities in the United States through funding of individual investigators, teams, centers, facilities, and instrumentation. Projects supported by DMR are essential for the development of future technologies

and industries that meet societal needs, as well preparation of the next generation of materials researchers. This solicitation applies to the following six DMR Topical Materials Research Programs that fund research and educational projects by individual investigators or small groups: Biomaterials (BMAT), Condensed Matter Physics (CMP), Electronic and Photonic Materials (EPM), Metals and Metallic Nanostructures (MMN), Polymers (POL), and Solid-State and Materials Chemistry (SSMC). It does not apply to the following two DMR Topical Materials Research Programs, which have their own solicitations: Ceramics (CER) (NSF 16-597) and Condensed Matter and Materials Theory (CMMT) (NSF 16-596). **NSF 17-580**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17580/nsf17580.htm*

Japan-US Network Opportunity
National Science Foundation (NSF)
Due Date: 11/30/2017

The Division of Computer and Network Systems (CNS) within the National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) supports research and education activities that develop a better understanding of the fundamental properties of computer and network systems and to create better abstractions and tools for designing, building, analyzing, and measuring future systems. The Networking Technology and Systems (NeTS) program in the CNS division supports transformative research on fundamental scientific and technological advances leading to the development of future-generation, high-performance networks and future Internet architectures. Under this umbrella, NSF and the National Institute of Information and Communications Technology (NICT) of Japan have agreed to embark on a collaborative research program to address compelling research challenges associated with enabling trustworthy networks supporting the Internet of Things (IoT) and cyber-physical systems (CPS). This NSF solicitation parallels an equivalent NICT solicitation. Proposals submitted under this solicitation must describe joint research with counterpart Japanese investigators who are requesting funding separately under the NICT solicitation. The IoT and CPS are becoming pervasive parts of everyday life, enabling a wide array of related emerging services and applications in cities and communities, including in health, transportation, energy/utilities, and other areas. As these systems become embedded in daily life, it is critically important that the networks underlying the services they provide be designed, built, deployed and operated in a highly trustworthy manner, i.e., that they are resilient against disasters, failures and other network disruptions. This program focuses on enabling ultra-high-availability, robust and reliable networks that can support continuity of service under duress. This requires consideration of end-to-end systems, including compute resources needed for services and applications, and creative and innovative ways of approaching the challenges outlined above.

This program seeks joint Japanese-US research projects that leverage each nation’s expertise and address the following work areas:
1) Trustworthy IoT/CPS Networking Developing the foundations for a future resilient edge cloud/network system to ensure trustworthy end-to-end networks, addressing such factors as the heterogeneity, characteristics, resource constraints and potential mobility of end devices/sensors, the diversity of access network technologies, the availability/placement of computing resources and Quality of Service (QoS) requirements.
2) Trustworthy Optical Communications and Networking Addressing the need for trustworthy, high-availability, agile optical edge/access and integrated optical/wireless networks that are resilient against disasters, large traffic surges and other major disruptions. **NSF 17-586**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17586/nsf17586.htm*

Computational Physics

National Science Foundation (NSF)
Due Date: 12/7/2017

Computational Physics (CP) supports research for computational and data-enabled science. The program emphasizes novel methods for high-performance computing, such as algorithm development and efficient use of novel architectures, that require significant code development. Priority will be given to proposals that, in addition to compelling scientific goals, have a computational advance or new enabling capability. Computational Physics is the program through which the Physics Division participates in the Computational and Data-Enabled Science and Engineering (CDS&E) program. The Computational Physics program is focused on investigations relevant to disciplines supported by the Physics Division, while encouraging broader impacts on other disciplines. Disciplines within the purview of the Physics Division include: atomic, molecular, optical, plasma, elementary particle, nuclear, gravitational and biological physics, particle astrophysics, and accelerator science. Proposals with intellectual focus in areas supported by other NSF Divisions should be submitted to those divisions directly. Proposals that cross Divisional lines are welcome, but the Physics Division encourages PIs to request a co-review by naming other Divisional programs on the cover sheet. This facilitates the co-review and participation of other programs in the review process. **This Program is part of Division Of Physics: Investigator-Initiated Research Projects. NSF 17-561**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17561/nsf17561.htm*

HEALTH, LIFE & EARTH SCIENCES

ROSES 2017: Discovery Data Analysis Program
National Aeronautics and Space Administration (NASA) - Science Mission Directorate (SMD)
Due Date: Step-1 Proposals 9/7/2017; Step-2 Proposals 11/5/2017

The objective of the Discovery Data Analysis Program (DDAP) is to enhance the scientific return of Discovery Program missions and broaden the scientific participation in the analysis of data, both recent and archived, collected by Discovery missions. Spacecraft data used in DDAP investigations must be available in the Planetary Data System, or equivalent publicly accessible archive(s), at least 30 days prior to the Step-2 submission deadline for DDAP proposals. The PDS archives and distributes scientific data from NASA planetary missions, astronomical observations, and laboratory measurements. Proposed work responsive to this call may include (1) data analysis tasks, 2) tasks that are not data analysis but are necessary to analyze or interpret the data, and 3) tasks that are not data analysis but that significantly enhance the use or facilitate the interpretation of Discovery mission data. These tasks may incorporate theory, modeling, laboratory studies, correlative analyses, and/or other research; however, proposals that include tasks that are not data analysis must also incorporate the results of these tasks into the analysis or interpretation of Discovery mission data in order to be responsive to this call. **NNH17ZDA001N-DDAP**

- **URL:***https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={410D2803-9FFE-F7D0-2CDA-6AABC9664AF5}&path=open*

ROSES 2017: Rosetta Data Analysis Program
National Aeronautics and Space Administration (NASA) - Science Mission Directorate (SMD)
Due Date: Step-1 Proposals 9/7/2017; Step-2 Proposals 11/5/2017

The objective of the Rosetta Data Analysis Program (RDAP) is to enhance the scientific return of the Rosetta mission and broaden the scientific participation in the analysis of archived data collected from the Rosetta and Philae spacecraft. Spacecraft data used in DDAP investigations must be available in the Planetary Data System, or equivalent publicly accessible archive(s), at least 30 days prior to the Step-2 submission deadline for DDAP proposals. The PDS archives and distributes scientific data from NASA planetary missions, astronomical observations, and laboratory measurements. Proposed work responsive to this call may include (1) data analysis tasks, (2) tasks that are not data analysis but are necessary to analyze or interpret the data, and (3) tasks that are not data analysis but that significantly enhance the use or facilitate the interpretation of Rosetta data. These tasks may incorporate theory, modeling, laboratory studies, correlative analyses, and/or other research; however, proposals that

include tasks that are not data analysis must also incorporate the results of these tasks into the analysis or interpretation of Rosetta mission data in order to be responsive to this call. **NNH17ZDA001N-RDAP**

- **URL:***https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={D8115F8F-DEFA-99CB-067C-742F41316A08}&path=open*

ROSES 2017: CYGNSS Competed Science Team
National Aeronautics and Space Administration (NASA) - Science Mission Directorate (SMD)
Due Date: Notices of Intent 9/8/2017; Proposals 11/8/2017

The Cyclone Global Navigation Satellite System (CYGNSS) was successfully launched into low Earth orbit on 15 December 2016. CYGNSS consists of a constellation of eight satellites, each carrying a four-channel bistatic radar receiver that measures GPS signals scattered by the Earth's surface. The CYGNSS mission was originally conceived to support improved sampling of ocean surface winds in tropical cyclones, by reducing the revisit time and lowering the sensitivity to precipitation relative to previous satellite-based wind observations, such as those from scatterometers. This ROSES element seeks to expand the utility of the CYGNSS measurements by demonstrating other scientific uses and end-user applications of the mission's science data products; successful proposers will become members of the Competed CYGNSS Science Team.
Example Research Areas:
- Quantitative Data Products and/or Analyses Focusing on Surface Wind and/or Air-Sea Interactions
- Physical Oceanography via Altimetry
- Storm surge
- Land Process Studies, Soil Moisture and Freeze/Thaw

The proposal must be focused on the use of CYGNSS data. The only CYGNSS data that may be used for the proposed activities are those that are publicly available at or through the Physical Oceanography Distributed Active Archive Center at the NASA Jet Propulsion Laboratory. **NNH17ZDA001N-CYGNSS**

- **URL:** *https://nspires.nasaprs.com/external/solicitations/summary!init.do?solId=%7b97AB0C24-FCB6-C017-8CC4-A7BFECA08874%7d&path=open*

ROSBio Appendix D: Solicitation of Proposals to Conduct Research Using Microgravity Simulation Devices

National Aeronautics and Space Administration (NASA) - Human Exploration and Operations Mission Directorate

Due Date: Notices of Intent 9/14/2017; Applications 10/16/2017

This Appendix to the Research Opportunities in Space Biology (ROSBio)-2016, NASA Omnibus Research Announcement (hereafter referred to as ROSBio-2016 Omnibus NRA) calls for research proposals that will use microgravity simulation devices to address gaps in current knowledge of how biological systems, including cells, tissues, microorganisms, plants, and whole organisms, respond to conditions of altered gravity. **NNH16ZTT001N-MS**

- **URL:** *https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B3BDECE04-5064-2F4E-4BBB-5DE7158AF25F%7D&path=&method=init*

AACR NextGen Grants for Transformative Cancer Research

American Association for Cancer Research (AACR)

Due Date: Letters of Intent 9/22/2017; Applications 1/8/2018

The proposed research must represent a highly innovative approach to a major contemporary challenge in cancer research. The funded projects must have the potential to lead to groundbreaking discoveries in the field, and transform our understanding of the tumorigenesis process and/or our ability to treat, detect, or prevent cancer. The research can be in any area of basic, translational, or clinical science.

- **URL:** *http://www.aacr.org/Funding/Pages/Funding-Detail.aspx?ItemID=48#.WZ8-Kz6GNph*

Assay development and screening for discovery of chemical probes or therapeutic agents (R01)

National Institutes of Health (NIH)

Due Date: 10/5/2017, 2/5/2018, 6/5/2018 (Standard NIH due dates apply – Letters of Intent due 30 days prior to application due date)

Through this funding opportunity announcement (FOA), NIH wishes to stimulate research in discovery and development of novel, small molecules for their potential use in studying disease treatment relevant to

the missions of the participating NIH Institutes; and to generate new insight into the biology of relevant diseases and processes that have yet to be validated as important drug targets. Stages of discovery research covered by this FOA include: 1) assay development; 2) primary screen implementation to identify initial screening hits (high throughput target-focused screens, or moderate throughput screens); 3) hit validation using a series of assays and initial medicinal chemistry inspection to prioritize the hit set. **PAR-17-438**

- **URL:** *https://grants.nih.gov/grants/guide/pa-files/PAR-17-438.html*

MacroSystems Biology and Early NEON Science
National Science Foundation (NSF)
Due Date: 10/16/2017

The MacroSystems Biology and Early NEON Science: Research on Biological Systems at Regional to Continental Scales program will support quantitative, interdisciplinary, systems-oriented research on biosphere processes and their complex interactions with climate, land use, and invasive species at regional to continental scales as well as planning, training, and development activities to enable groups to conduct MacroSystems Biology and Early NEON Science research. **NSF 16-521**

- **URL:** *https://www.nsf.gov/pubs/2016/nsf16521/nsf16521.htm*

3D Elevation Program (3DEP)
United States Department of the Interior (DOI) - U.S. Geological Survey (USGS)
Due Date: 10/20/2017 *(BAA will remain open and proposals received after the initial due date will be considered for review until 9/30/2018 or until the BAA is cancelled through an amendment or another BAA is issued)*

This Broad Agency Announcement (BAA) is issued to facilitate the collection of lidar and derived elevation data for the 3D Elevation Program (3DEP). The BAA continues the USGS's long-standing approach to elevation data acquisition through a combination of contracting through the USGS Geospatial Products and Services Contracts (GPSC) and partner acquisitions. The BAA is meant to provide increased visibility to these existing processes for data acquisition partnerships to the broadest stakeholder community possible. 3DEP was developed to respond to needs for high-quality topographic data and for a wide range of other three-dimensional representations of the Nation's natural and constructed features. 3DEP is based on the results of the National Enhanced Elevation Assessment (NEEA) (http://nationalmap.gov/3dep/neea.html), which indicated an optimal benefit to

cost ratio for Quality Level 2 (QL2) data collected over 8-years to complete national coverage. 3DEP aspires to systematically collect elevation data in the form of high-quality light detection and ranging (lidar) data over the conterminous United States, Hawaii, and the U.S. territories, as well as interferometric synthetic aperture radar (ifsar) data over Alaska. **G17AS00116**

- **URL:** *https://www.grants.gov/custom/viewOppDetails.jsp?oppId=296530*

Standard Research Innovation Grants
American Foundation for Suicide Prevention (AFSP)
Due Date: 11/15/2017

AFSP is committed to funding innovative research in all areas related to suicide. Both basic science and applied research projects will be considered, provided that the proposed study has an essential focus on suicide or suicide prevention. All AFSP research grants are designed to support research on suicide from a variety of disciplines including psychiatry, medicine, psychology, genetics, epidemiology, neurobiology, sociology, nursing, health services administration and many others. Grants are not intended to support the development or implementation of prevention programs, educational programs, treatments, or other interventions that do not have a significant research component. Grants support studies aimed at increasing the understanding of the causes of suicide and factors related to suicide risk, or that test treatments and other interventions designed to prevent suicide. At least one suicide outcome measure must be included in all grant projects. It also considers studies of treatment feasibility, and studies that add a suicide component (e.g., population or treatment) to an existing grant in another area. In an effort to stimulate research in understudied areas, it selects priority areas for funding.

- **URL:** *https://afsp.org/our-work/research/grant-information/*

Small Grants for Secondary Analyses of Existing Data Sets and Stored Biospecimens (R03)
National Institutes of Health (NIH)
Due Date: 10/16/2017, 2/26/2018, 6/16/2018 (Standard NIH due dates apply)

This Funding Opportunity Announcement (FOA) encourages applications that propose to conduct secondary analyses of publicly available NICHD-funded data sets or stored biospecimens. The goal of this program is to facilitate innovative yet cost-effective research utilizing data and biospecimens collected with NICHD resources. **PA-17-299**

- **URL:** *https://grants.nih.gov/grants/guide/pa-files/PA-17-299.html*

Division of Molecular and Cellular Biosciences: Investigator-Initiated Research Projects (MCB)
National Science Foundation (NSF)
Due Date: 11/20/2017

The Division of Molecular and Cellular Biosciences (MCB) supports quantitative, mechanistic, predictive, and theory-driven fundamental research designed to promote understanding of complex living systems at the molecular, subcellular, and cellular levels. While recognizing the need for thorough and accurate descriptions of biological complexes and pathways, the priority of the Division is to support work that advances the field by capturing the predictive power of mechanistic, quantitative, and evolutionary approaches. **MCB is soliciting proposals in four core clusters:**

- Cellular Dynamics and Function
- Genetic Mechanisms
- Molecular Biophysics
- Systems and Synthetic Biology

MCB gives high priority to research projects that use theory, methods, and technologies from life and physical sciences, mathematics, computational sciences, and engineering to address major biological questions that elucidate the rules governing subcellular and cellular processes. Research supported by MCB uses a range of experimental and computational approaches--including in vivo, in vitro, and in silico strategies--and a broad spectrum of model and non-model organisms, including microbes and plants. Typical research supported by MCB integrates theory and experimentation. Projects are particularly welcome that address the emerging areas of: multi-scale integration; transformative methods and resources (when driven by compelling biological questions); molecular and cellular evolution; the synthesis of life-like systems; and the quantitative prediction of the phenome from genomic information. Highest funding priority is given to applications that have outstanding intellectual merit and strong broader impacts, while proposals with weaknesses in either category (or those that are perceived as likely to have an incremental impact) will not be competitive. Proposals that are motivated by relevance to human health and disease treatment are not appropriate for the Division and will be returned without review. **NSF 17-589**

- **URL:** *https://www.nsf.gov/pubs/2017/nsf17589/nsf17589.htm*

Section Health Policy and Administration Grant Program (HPA Grant Program)
American Physical Therapy Association (APTA)
Due Date: 12/31/2017

The purpose of the Section Health Policy and Administration Grant Program is to stimulate, encourage and support research activities that enhance the body of knowledge related to health policy, clinical administration, global health, and the use of technology in physical therapy. The grants provide funding to assist new physical therapist investigators, or established investigators who are embarking on a new research agenda in these areas of physical therapist practice, leadership, administration, or education. Through this grant program, the Section hopes to encourage the development of proposals that will seek financial support from external agencies. Research grant awards are available to Section members to assist with a one-year research study that investigates a question or questions of importance to health policy or clinical administration.

Types of grants:

a. Research grant - A grant to support a stand-alone research project or a part of a larger series of projects

b. Development grant - A research development award to assist in the development of research projects that will be submitted to an institution or public or private agency for funding. The purpose of the award is to provide seed money to fund the development of a competitive grant proposal. (Money can be used for faculty release time to do pilot work, hiring of consultants or purchasing supplies.)

- **URL:** *http://www.aptahpa.org/page/HPAGrant*

LIBRARIES

Laura Bush 21st Century Librarian Program (LB21)
Institute of Museum and Library Services (IMLS)
Due Date: Preliminary Proposals 9/1/2017; Full Proposals 1/16/2018

The Laura Bush 21st Century Librarian Program (LB21) supports developing a diverse workforce of librarians to better meet the changing learning and information needs of the American public by: enhancing the training and professional development of librarians, developing faculty and library leaders, and recruiting and educating the next generation of librarians. Your application must designate

one of these four funding categories. You may submit as many applications as you wish; however, the same proposal may not be submitted to IMLS under more than one category. Please note: proposals that address challenges faced by the library and archives fields, but do not focus on education and training of librarians, should be submitted to the National Leadership Grants for Libraries program. **LB21-FY18-1**

Planning Grants allow project teams to perform preliminary planning activities, such as analyzing needs and feasibility, solidifying partnerships, developing project work plans, or developing prototypes, or proofs of concept, and pilot studies. Assessing the outcomes of planning activities should be appropriate to this early stage of work. Applications are expected to provide a basic framework for planning activities that have the potential to lead to a future project.
National Forum Grants provide the opportunity to convene qualified groups of experts and key stakeholders, including those from adjacent fields as appropriate, with the purpose of fostering discussion and consideration of nationally important professional development and education-related issues among libraries and archives across the nation. National Forum grant recipients are expected to produce reports for wide dissemination with expert opinions for action or research that address key challenge(s) identified in the proposal. Additional mechanisms for engaging stakeholders and building awareness of the findings are encouraged.
Project Grants support projects to develop faculty and library leaders, recruit and educate the next generation of librarians and archivists, and assist in the professional development of library and archives staff. It is essential that projects have clear potential for broad impact. Projects may scale or further evolve an earlier phase of work, but should not simply sustain an existing project.
Research Grants involve the investigation of key questions important to the library or information science professions. Basic and applied research projects should build upon prior empirical or theoretical work in libraries and archives or other fields, such as anthropology, learning sciences, sociology, etc., as appropriate. Research proposals should include clearly articulated research questions; feature data collection and analysis methods that help the project team answer their questions; and include dissemination strategies that allow the research team to share broadly the research findings and implications of the findings for libraries and archives.

- **URL:** *https://www.imls.gov/nofo/laura-bush-21st-century-librarian-program-fy18-notice-funding-opportunity*

National Leadership Grants for Libraries
Institute of Museum and Library Services (IMLS)
Due Date: Preliminary Proposals 9/1/2017; Full Proposals 1/16/2018

National Leadership Grants for Libraries (NLG) support projects that address significant challenges and opportunities facing the library and archive fields and that have the potential to advance theory and practice. Successful proposals will generate results such as new tools, research findings, models, services, practices, or alliances that will 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. Your application must designate one of these funding categories. You may submit as many applications as you wish; however, the same proposal may not be submitted to IMLS under more than one category. Please note: proposals that focus on education and training of librarians should be submitted to the Laura Bush 21st Century Librarian grant program. **NLG-LIBRARIES-FY18-1**

- **URL:** *https://www.imls.gov/nofo/national-leadership-grants-libraries-fy18-notice-funding-opportunity*

NEW FACULTY / INVESTIGATOR

Frederick Burkhardt Residential Fellowships for Recently Tenured Scholars
American Council of Learned Societies (ACLS)
Due Date: 9/27/2017

ACLS invites applications for Frederick Burkhardt Residential Fellowships for Recently Tenured Scholars, made possible by the generous assistance of The Andrew W. Mellon Foundation. The fellowships are named for the late Frederick Burkhardt, president of ACLS from 1957-74, whose decades of work on The Correspondence of Charles Darwin constitute a signal example of dedication to a demanding and ambitious scholarly enterprise. These fellowships support long-term, unusually ambitious projects in the humanities and related social sciences. The ultimate goal of the project should be a major piece of

scholarly work by the applicant. ACLS does not fund creative work (e.g., novels or films), textbooks, straightforward translation, or pedagogical projects. The Burkhardt program offers two sets of opportunities for recently tenured humanists. The first set of Burkhardt Fellowships support an academic year (nine months) of residence at any one of the 13 participating residential research centers, and are open to faculty at any degree-granting academic institution in the United States. An additional set of Burkhardt Fellowships are designated specifically for liberal arts college faculty, and support an academic year of residence at a wider range of locations including campus humanities centers and university academic departments to be proposed by the applicant. (Liberal arts college faculty may apply for either of the Burkhardt awards and should select the fellowship opportunity that will best serve their project.)

- **URL:** *http://www.acls.org/programs/burkhardt/*

National Academy of Education/Spencer Postdoctoral Fellowship Program
National Academy of Education (NAEd)
Due Date: 11/2/2017

The program supports early career scholars working in critical areas of education research. This non-residential postdoctoral fellowship funds proposals that make significant scholarly contributions to the field of education. The program also develops the careers of its recipients through professional development activities involving NAEd members. Applications are reviewed by NAEd members and are judged on the applicant's past research record, career trajectory, and the quality of the project described in the application.

- **URL:** *https://naeducation.org/naedspencer-postdoctoral-fellowship-guidelines/*

Young Investigator Innovation Grants
American Foundation for Suicide Prevention (AFSP)
Due Date: 11/15/2017

An additional purpose of the Young Investigator Grant is to assist new researchers to obtain the advice, guidance and supervision of an established mentor in a selected area of suicide research.

AFSP suicide research grants program priority areas for 2017-19:
- Pain and suicide
- Opioids and suicide

- **URL:** *https://afsp.org/our-work/research/grant-information/*

SOCIAL & BEHAVIORAL SCIENCES

Linked Standard Research Innovation Grants
American Foundation for Suicide Prevention (AFSP)
Due Date: Letters of Intent 9/15/2017; Applications 11/15/2017

These grants are awarded to investigators at any level performing research involving two or more unique sites with each site contributing unique expertise, as well as data collection. Both basic science and applied research projects will be considered, provided that the proposed study has an essential focus on suicide or suicide prevention. This grant mechanism is designed to encourage implementation of a common grant protocol at three or more sites. Applicants must provide a compelling rationale for the linked grant (more than availability of a larger sample size), designate who will be responsible for the overall conduct and quality control of the study, designate who will be responsible for the data analyses, and discuss how the work at the various sites will be coordinated. All AFSP research grants are designed to support research on suicide from a variety of disciplines including psychiatry, medicine, psychology, genetics, epidemiology, neurobiology, sociology, nursing, health services administration, social work, and many others. Grants are not intended to support the development or implementation of prevention programs, educational programs, treatments, or other interventions that do not have a significant research component. Survey data suggests that individuals who are LGBT are at greater risk for suicide attempts (Haas, Eliason et al. 2011). However, confirmation of this finding is needed across a wider range of samples and using a wider range of data collection methods. In an effort to learn more about this issue AFSP suggests that all AFSP-funded researchers who are collecting original data systematically assess research participants for sexual orientation and gender identity. AFSP defines priorities for funding every two years to stimulate research in understudied areas. AFSP also encourages applications that address the priorities set out by the National Action Alliance for Suicide Prevention's Research Prioritization Task Force. Priority area research applications are reviewed along with the general pool of grant applications, with priority given to strong grants in the designated areas.

AFSP suicide research grants program priority areas for 2017-19
1. Pain and suicide
2. Opioids and suicide

- **URL:** *https://afsp.org/our-work/research/grant-information/*

STUDENTS

Program on Philanthropy and Social Innovation (PSI) - William Randolph Hearst Endowed Fellowship for Minority Students
Aspen Institute
Due Date: 9/8/2017 (Fall), 11/22/2017 (Spring), 3/17/2018 (Summer)

The Aspen Institute Program on Philanthropy and Social Innovation (PSI) in Washington, DC, offers this fellowship three times annually. The Hearst Fellow serves as an intern with PSI in the Washington, DC office of the Aspen Institute. PSI seeks to inform and maximize the impact of grantmaking foundations, nonprofit organizations, social enterprises, and public-private partnerships through leadership development initiatives, convenings, and communications so that each can contribute to the good society at home and abroad. Through this fellowship, PSI seeks to introduce a diverse group of students to issues and challenges affecting philanthropy, social enterprise, nonprofit organizations, and other actors in the social sector. Recipients may arrange with their colleges or universities to receive academic credit for this experience. In his or her internship, the Hearst Fellow undertakes research, writing, logistical, and administrative support for PSI's leadership initiatives, public programs, and convenings.

- **URL:** *https://www.aspeninstitute.org/programs/program-on-philanthropy-and-social-innovation-psi/william-randolph-hearst-endowed-fellowship-for-minority-students/*

Grants
Horowitz Foundation for Social Policy
Due Date: 12/1/2017

The foundation targets projects with a social policy application on either a global or local level.

The foundation's Aim and Mission are
- to support emerging scholars through small grants
- to promote scholarship with a social policy application
- to encourage projects that address contemporary issues in the social sciences

Applications are evaluated based on the Trustees' assessment of criteria such as: feasibility, applicability, originality, methodology, theoretically informed or empirically rich research and letters of recommendation. No specific weight is given to any one area. Proposals are evaluated based on overall merit of all aspects of the application.

- **URL:** *https://www.horowitz-foundation.org/grant-info*

E-Team Program
VentureWell
Due Date: 10/4/2017, 2/7/2018, 5/2/2018

The Program cultivates opportunities for collegiate technology entrepreneurs by providing early-stage support and funding. The E-Team Program gives college students the chance to move new tech ideas out of the lab and classroom and into the marketplace. The three-stage program provides grant funding, experiential workshops, veteran coaching and a potential investment opportunity to help teams manifest their projects' full commercial potential. The foundation defines an "E-Team" as a multidisciplinary group of students, faculty, and mentors working together to bring an invention to market.

- **URL:** *https://venturewell.org/student-grants/*