

Funding Bulletin

July 15th, 2016 (Vol. 3, No. 20)

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.

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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/>



OFFICE OF RESEARCH WORKSHOPS

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

WORKSHOP TITLE	DATE	TIME	ROOM	DESCRIPTION
Research Compliance Open Lab	July 20	9:00 – 11:00 a.m.	2015 Devlin Hall Innovation hub	The Research Compliance Office will hold an open lab for questions regarding hiring foreign nationals; shipping or receiving items from outside the US; international travel; review of Research projects for export compliance; conflicts of interest & management plans. <i>This is a come and go lab with no registration required.</i>
IRB Open Lab	July 21	1:00 – 2:30 p.m.	409E 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. <i>This is a come and go lab with no registration required.</i>
Pivot Open Lab	July 28	2:30 – 4:00 p.m.	409E Jardine	The Office of Research will be holding Open Labs this fall for Faculty interested in using PIVOT as well as answering questions regarding their existing account. <i>This is a come and go lab with no registration required.</i>
IRB Open Lab	August 8	1:30 – 3:00 p.m.	409E 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. <i>This is a come and go lab with no registration required.</i>
Research Compliance Open Lab	August 17	9:00 – 11:00 a.m.	2015 Devlin Hall Innovation hub	The Research Compliance Office will hold an open lab for questions regarding hiring foreign nationals; shipping or receiving items from outside the US; international travel; review of Research projects for export compliance; conflicts of interest & management plans. <i>This is a come and go lab with no registration required.</i>
Animals & People, Oh My! An Overview of IRB and IACUC	August 19	1:00 – 2:30 p.m.	405 Jardine	Presenters: Katie Williams & Linda Steinacher. Please RSVP through the WSU My Training Portal.
Award Management: Keeping Your Award on Track to the Final Report	Sept. 21	2:30 – 4:00 p.m.	405 Jardine	This workshop will cover grant set-up, reporting requirements, research payroll, internal and external grant period extensions, and making budget changes. Presenter: Amy Delgado, Associate Director of Post-Award. RSVP through WSU My Training Portal.

NOTICES

WSU Pivot User Satisfaction Survey

The Office of Research has created a short survey to gauge user satisfaction for Pivot, the comprehensive funding database that the university subscribes to. Participation is confidential and optional; results will be utilized to evaluate customer satisfaction with funding search support. Your feedback is appreciate! Please follow the link below to access the survey:

https://wichitastate.co1.qualtrics.com/jfe/form/SV_dba6YUit2HA8c6x

FastLane Compliance Check Changes Coming July 25, 2016

The National Science Foundation (NSF) is updating automated compliance checks in the FastLane portal, starting July 25. As part of these new shifts, the system will not allow proposals to be submitted without Biographical Sketches and Current and Pending Support files for each Senior Personnel associated with a proposal. Furthermore, Biographical Sketches may now only be uploaded as a file, must not exceed two pages and can no longer be entered as text. Attempts to submit a proposal that does not comply with these checks will trigger an error message. These checks will also apply to any Proposal File Update (PFU) submitted after July 25, regardless of which section was updated during the PFU. These changes will only stop noncompliant applications from being submitted through FastLane; Grants.gov will allow a proposal to be submitted, even if it does not comply with these proposal preparation requirements. Should NSF receive a proposal from Grants.gov that is not compliant, it will be returned without review. For more information about these changes, click [here](#). For a full list of all FastLane auto-compliance checks, including these checks, click [here](#).

INTERNAL OPPORTUNITIES

Multidisciplinary Research Project Awards (MURPA)

Wichita State University

Due Date: 10/7/2016

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

For more information, visit

<http://webs.wichita.edu/?u=WSURESEARCHADMIN&p=/ORAIInternalGrants/ORAIInternalGrants/>

University Research/Creative Projects (URCA) – Round Two

Wichita State University

Due Date: 10/7/2016

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

For more information, visit

<http://webs.wichita.edu/?u=wsuresearchadmin&p=/ORAIInternalGrants/ORAIInternalGrants/>

LIMITED SUBMISSIONS

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

(1) Institutional Research and Academic Career Development Awards (IRACDA) (K12)

National Institutes of Health (NIH) - National Institute of General Medical Sciences (NIGMS)

Due Date: Internal 8/5/2016; Application 9/19/2016

The purpose of the Institutional Research and Academic Career Development Award (IRACDA) Program is to develop a group of highly trained biomedical scientists to address the Nation's biomedical workforce needs. The strategy is to promote effective partnerships between research-intensive institutions (RII) and partner institutions that have a historical mission or a demonstrated commitment to educating students from backgrounds underrepresented in the biomedical research enterprise of the nation. The IRACDA program provides support for a traditional mentored postdoctoral research experience at an RII combined with an opportunity for these fellows to develop critical academic skills, including teaching, through workshops and mentored teaching assignments at a partner institution. The primary goals of the IRACDA program are to (1) develop a group of highly trained biomedical scientists who have the necessary knowledge and skills to pursue independent research and teaching careers in academia; and (2) enhance science educational offerings at partner institutions, and promote links between RII and the partner institution(s) through research and teaching collaborations. **Only one application per institution is allowed. PAR-16-103**

- URL: <https://grants.nih.gov/grants/guide/pa-files/PAR-16-103.html>

(2) Summer Stipends

National Endowment for the Humanities (NEH)

Due Date: Internal 8/5/2016; Nominations 9/29/2016

Summer Stipends support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Eligible projects usually result in articles, monographs, books, digital materials

and publications, archaeological site reports, translations, editions, or other scholarly resources. Summer Stipends support projects at any stage of development. Faculty members teaching full-time at colleges or universities must be nominated by their institutions to apply for a Summer Stipend. Once faculty members are nominated by their institutions, they may submit their applications. ***Each college and university in the United States and its jurisdictions may nominate two faculty members.***

- URL: <http://www.neh.gov/grants/research/summer-stipends>

(3) Partnerships for International Research and Education (PIRE)

National Science Foundation (NSF)

Due Date: Internal 8/5/2016; Preliminary Proposal 9/14/2016; Full Proposal 4/24/2017

Partnerships for International Research and Education (PIRE) is an NSF-wide program that supports international activities across all NSF-supported disciplines. The primary goal of PIRE is to support high quality projects in which advances in research and education could not occur without international collaboration. PIRE seeks to catalyze a higher level of international engagement in the U.S. science and engineering community. International partnerships are essential to addressing critical science and engineering problems. In the global context, U.S. researchers and educators must be able to operate effectively in teams with partners from different national environments and cultural backgrounds. PIRE promotes excellence in science and engineering through international collaboration and facilitates development of a diverse, globally-engaged, U.S. science and engineering workforce. This PIRE competition will be open to all areas of science and engineering research which are supported by the NSF. ***A single organization may submit one preliminary proposal as the lead institution. Full proposals will be accepted by invitation only. There is no limit on the number of proposals in which an institution can participate as a partner. NSF 16-571***

- URL: <http://www.nsf.gov/pubs/2016/nsf16571/nsf16571.htm>

GENERAL

Research Training Program for College and University Students

U.S. Environmental Protection Agency (EPA)

Due Date: 8/16/2016

EPA-ORD seeks applications from eligible entities to enter into cooperative agreements with EPA that will provide training opportunities for undergraduate and graduate students on-site at EPA-ORD research facilities located in Cincinnati, OH. It is envisioned that the training program will increase both the effectiveness and number of future environmental scientists. The training received under the mentorship of EPA scientists will complement the trainees' academic coursework. The recipient will be responsible for ensuring that the training projects are supportive of the trainees' academic training. Some examples of the fields of study for desirable trainees include, but are not limited to, those majoring in chemistry, engineering, biology, computer science, physical science, life science, ecology, and urban planning. **EPA-G2016-ORD-C1**

- **URL:** <https://www.epa.gov/research-grants/research-training-program-college-and-university-students>

ARTS & HUMANITIES

Documenting Endangered Languages (DEL)

National Science Foundation (NSF)

Due Date: 9/26/2016

This funding partnership between the National Science Foundation (NSF) and the National Endowment for the Humanities (NEH) supports projects to develop and advance knowledge concerning endangered human languages. Made urgent by the imminent death of roughly half of the approximately 7000 currently used languages, this effort aims to exploit advances in information technology to build computational infrastructure for endangered language research. The program supports projects that contribute to data management and archiving, and to the development of the next generation of researchers. Funding can support fieldwork and other activities relevant to the digital recording, documenting, and archiving of endangered languages, including the preparation of lexicons, grammars, text samples, and databases. **NSF 16-576**

- **URL:** <http://www.nsf.gov/pubs/2016/nsf16576/nsf16576.htm>

Mary McMullan Grants

National Art Education Association (NAEA) - National Art Education Foundation (NAEF)

Due Date: 10/1/2016

The National Art Education Foundation (NAEF) invites proposals for support of projects that promote art education as an integral part of the curriculum; to establish and/or improve the instruction of art in public and private elementary and secondary schools as well as schools of higher education in the USA. The applicant must identify the ways in which the project will support the improvement of their teaching of art. The following areas of classroom-based action research* will be considered for funding. These funds support individual art educators to test new models in their classrooms. Funds cannot be used to provide professional development institutes or similar programs for others.

1. Curriculum Models

- Development of model in-school art education programs targeting selected participants as ongoing components of the curriculum;
- Teacher development of models that focus on student-centered solutions to art education curriculum; and
- Development of curriculum models that focus on global perspectives of art resources

2. Pilot Projects

- Development of pilot projects focusing on teacher training and student learning emphasizing the approved goals of the National Art Education Association

3. Policy Models

- Development of models that promote quality art education to educators, business leaders, and policy makers - people in positions to effect lasting improvements in the status of art education.

*Action research is systematic reflective inquiry that is done by art educators working individually, or in collaboration with others, in schools, museums, community arts centers and those other locations in which art education occurs. Action research emphasizes discovering possible responses to problems and questions emerging within the setting in which the researcher is working.

- URL: <https://www.arteducators.org/opportunities>

Research Grants

National Art Education Association (NAEA) - National Art Education Foundation (NAEF)

Due Date: 10/1/2016

The National Art Education Foundation invites proposals to support research in art education that advances knowledge in the field of art education and that supports the themes outlined in the NAEA Research Agenda. Funds are awarded to selected art educators whose proposals specifically focus on issues relating to one of the recommendations identified in this document. Grants are awarded to art

educators to pursue a broad range of research topics that are included within the NAEA Research Agenda adopted in 2014. NAEF encourages the submissions of proposals to conduct research that investigates the impact and importance of arts education in student learning and provides hard data to support the findings of the research. Eligible applicants are welcome to submit proposals in all areas of research. In addition, as part of NAEF's collaboration with the NAEA Research Commission, NAEF encourages submissions of the following proposals:

- Proposals that support the creation of communities of learners, including both researchers and practitioners, working together to explore a research question and/or problem.
- Proposals that support the identification of best practice and research that leads to further understanding of the impact and importance of arts education to student learning in and through the visual arts in a variety of settings, with an interest in research that provides quantitative data to support its findings.

- URL: <https://www.arteducators.org/opportunities/national-art-education-foundation>

Ruth Halvorsen Professional Development Grant

National Art Education Association (NAEA) - National Art Education Foundation (NAEF)

Due Date: 10/1/2016

The National Art Education Foundation (NAEF) invites proposals for scholarships that promote NAEA's efforts to initiate and encourage the understanding and implementation of the goals for student learning promulgated through the National Visual Arts Standards. Funds are awarded to selected art educators whose proposals focus on understanding, implementation, and issues specifically relating to the National Visual Arts Standards and support the improvement of the teaching of art.

- URL: <https://www.arteducators.org/opportunities/articles/233-apply-for-an-naef-grant>

SHIP Grants

National Art Education Association (NAEA) - National Art Education Foundation (NAEF)

Due Date: 10/1/2016

NAEF invites proposals for scholarships that promote NAEA's efforts to initiate and encourage the understanding and implementation of the goals for student learning promulgated through the National Visual Arts Standards. Funds are awarded to selected art educators whose proposals seek art equipment and/or instructional curriculum resources used to focus on student learning specifically related to the National Visual Arts Standards.

- URL: <https://www.arteducators.org/opportunities/national-art-education-foundation>

Teacher Incentive Grants Program

National Art Education Association (NAEA) - National Art Education Foundation (NAEF)

Due Date: 10/1/2016

The National Art Education Foundation (NAEF) invites proposals for scholarship support of projects that promote the improvement of the teaching of art. Funds are awarded to classroom-based action research* projects that facilitate development of the applicant's teaching capacities to provide visual art instruction that reflects the vision promulgated by the NAEA in areas such as curriculum; student learning; student assessment; classroom behavior, management, or discipline; or other practices relating to instructional interaction and the achievement of student learning. The applicant must identify the ways in which the project will support the improvement of their teaching of art. These funds support individual art educators to test new models in their classrooms. Funds cannot be used to provide professional development institutes or similar programs for others.

*Action research is systematic reflective inquiry that is done by art educators working individually, or in collaboration with others, in schools, museums, community arts centers and those other locations in which art education occurs. Action research emphasizes discovering possible responses to problems and questions emerging within the setting in which the researcher is working.

- URL: <https://www.arteducators.org/opportunities/articles/233-apply-for-an-naef-grant>

Dexter Jones Award

National Sculpture Society (NSS)

Due Date: 10/3/2016

This award is presented annually to a sculptor for an outstanding work of sculpture in bas-relief. The use of figurative or realist sculpture is of greatest interest.

- URL: <http://nationalsculpture.org/programs-awards>

Sabbatical Grant for Researchers

Louisville Institute (LI)

Due Date: 11/1/2016

This program enables ecclesially-engaged academics and scholarly religious leaders to conduct a major study that can contribute to the vitality of Christianity in North America. Grants support year-long research projects that address Christian faith and life, the practice of ministry, and/or religious institutions. Proposed projects may employ a variety of methodological perspectives, including, but not

limited to, historical, systematic and practical theology, the social sciences, history, ethics, or biblical studies. They may also be interdisciplinary in nature. All applicants should make clear how their project will contribute to the life of the church in North America.

- URL: <http://louisville-institute.org/programs-grants-and-fellowships/grants/sabbatical-grant-for-researchers/>

William H. Johnson Prize

Johnson Foundation for the Arts, William H.

Due Date: 11/10/2016

The William H. Johnson Foundation for the Arts is a nonprofit, tax-exempt organization that seeks to encourage African American artists early in their careers by offering financial grants. The Johnson Foundation awards grants to individuals who work in the following media: painting, photography, sculpture, printmaking, installation and/or new genre. The William H. Johnson Prize is awarded annually to an early-career African American artist.

- URL: <http://www.whjohnsongrant.org/whjform/>

BUSINESS

Research Report Stipends

IBM Center for the Business of Government

Due Date: 10/3/2016, 4/3/2017

The aim of the Center is to tap into the best minds in academe and the nonprofit sector who can use rigorous public management research and analytic techniques to help public sector executives and managers improve the effectiveness of government. The Center is looking for very practical findings and actionable recommendations - not just theory or concepts - in order to assist executives and managers to more effectively respond to mission and management challenges. While a majority of the Center's reports are targeted to executives and managers in the U.S. federal government, it is also interested in reports that discuss new approaches to improving the effectiveness of government at state, local, and international levels. The most competitive proposals tend to be those that have a very strong "story" or are clearly generalizable to a very broad audience.

- URL: <http://www.businessofgovernment.org/content/research-stipends>

A bi-weekly publication of the Office of Research and Technology Transfer. For additional information or to request a customized funding opportunity search, please contact funding@wichita.edu.

EDUCATION

Learning and Leadership Grants

National Education Association - NEA Foundation for the Improvement of Education (NFIE)

Due Date: 10/15/2016, 2/1/2017, 6/1/2017

The grants support public school teachers, public education support professionals, and/or faculty and staff in public institutions of higher education for one of the following two purposes:

- Grants to individuals fund participation in high-quality professional development experiences, such as summer institutes or action research; or
- Grants to groups fund collegial study, including study groups, action research, lesson study, or mentoring experiences for faculty or staff new to an assignment.

All professional development must improve practice, curriculum, and student achievement. "One-shot" professional growth experiences, such as attending a national conference or engaging a professional speaker, are discouraged. Decisions regarding the content of the professional growth activities must be based upon an assessment of student work undertaken with colleagues, and must be integrated into the institutional planning process. Grant funds may be used for fees, travel expenses, books, or other materials that enable applicants to learn subject matter, instructional approaches, and skills. Recipients are required to exercise professional leadership by sharing their new learning with their colleagues.

- URL: <http://www.neafoundation.org/pages/learning-leadership-grants/>

7-12 Classroom Research Grants

National Council of Teachers of Mathematics (NCTM)

Due Date: 11/4/2016

The purpose of this grant is to support and encourage classroom-based research in precollege mathematics education in collaboration with college or university mathematics educators. For 2017-18 grants will be awarded to mathematics educators or classroom teachers currently teaching mathematics at the grades 7-12 level. ***The research must be a collaborative effort involving a college or university mathematics educator (a mathematics education researcher or a teacher of mathematics learning, teaching, or curriculum) and one or more grades 7-12 classroom teachers (individuals who spend half or more of their work time teaching in the classroom).*** The proposal may include, but is not restricted to, research on the following topics:

- Curriculum development and implementation
- Involvement of at-risk or minority students

- Students' thinking about a particular mathematics concept or set of concepts
- Connection of mathematics to other disciplines
- Focused learning and teaching of mathematics with embedded use of technology (any acquisition of equipment must support the proposed plan but not be the primary focus of the grant)
- Innovative assessment or evaluation strategies

Involvement of preservice teachers is encouraged but not required. This research should lead to a draft article suitable for submission in the *Mathematics Teacher Educator*, *Journal for Research in Mathematics Education*, or in one of the NCTM school journals. Proposals must address the following: research design, the plan for collecting and analyzing data, and the anticipated impact on students' learning.

- URL: <http://www.nctm.org/Grants-and-Awards/Grants/7-12-Classroom-Research-Grants/>

Pre-College Mathematics Research

National Committee of Teachers of Mathematics (NCTM)

Due Date: 11/4/2016

[*Principles to Actions: Ensuring Mathematical Success for All*](#) (NCTM 2014) suggests that teachers must identify what counts as evidence of student progress toward mathematics learning goals and reflect on evidence to inform the planning of future instruction. In addition, teachers should work collaboratively with colleagues, families, and community members to ensure that all students have the support they need to maximize success in the math classroom. To support those recommendations, the [National Committee of Teachers of Mathematics](#) is accepting applications for classroom-based research in precollege mathematics education conducted in collaboration with college or university mathematics educators. For 2017-18, grants of up to \$6,000 will be awarded to mathematics educators or classroom teachers currently teaching math at the grades 7-to-12 level. The research must be a collaborative effort involving a college or university mathematics educator (a mathematics education researcher or a teacher of mathematics learning, teaching, or curriculum) and one or more grade 7-12 classroom teacher (individuals who spend half or more of their work time teaching in the classroom). The proposal may include but is not restricted to research on curriculum development and implementation, involvement of at-risk or minority students, students' thinking about a particular mathematics concept or set of concepts, connection of mathematics to other disciplines, focused learning and teaching of mathematics with embedded use of technology (any acquisition of equipment must support the proposed plan but not be the primary focus of the grant), and/or innovative assessment or evaluation strategies. Involvement of preservice teachers is encouraged but not required. The research should lead to a draft article suitable for submission in the *Mathematics Teacher Educator*, *Journal for Research in Mathematics Education*, or in one of the NCTM school journals. Proposals must address the following: research design, the plan for collecting and analyzing data, and the anticipated impact on students' learning. The applicant must be a current (on or before October 14, 2016) Full Individual or E-Member

of NCTM, if a 9-12 teacher, or one who teaches at a college or university. Seventh- or 8th-grade teacher applicants may be a current (on or before October 14, 2016) Full Individual or E-Member of NCTM or teach at a school having a current (on or before October 14, 2016) NCTM Pre-K-8 school membership.

- URL: <http://www.nctm.org/Grants-and-Awards/Grants/7-12-Classroom-Research-Grants/>

Pre-K-6 Classroom Research Grants

National Council of Teachers of Mathematics (NCTM)

Due Date: 11/4/2016

The [National Council of Teachers of Mathematics](http://www.nctm.org) supports teachers with research and professional development opportunities to ensure mathematics learning of the highest quality for all students. With support from the [Edward G. Begle](http://www.edwardgbeagle.com) Fund, NCTM is accepting proposals for its Pre-K-6 Classroom Research Grants program, which is designed to support and encourage classroom-based research in precollege mathematics education in collaboration with college or university mathematics educators. Through the program, grants of up to \$6,000 will be awarded to mathematics educators or classroom teachers currently teaching mathematics at the pre-K–6 grade level. **To be supported by a grant, the proposed research must involve a college or university mathematics educator and one or more classroom teachers teaching at the pre-K–6 level.** The proposal may include but is not restricted to research related to curriculum development and implementation; involvement of at-risk or minority students; students’ thinking about a particular mathematics concept or set of concepts; connection of mathematics to other disciplines; the learning and teaching of mathematics with the embedded use of technology (any acquisition of equipment must support the proposed plan but not be the primary focus of the grant); and/or innovative assessment or evaluation strategies. Involvement of pre-service teachers is encouraged but not required. The research should lead to a draft article suitable for submission in *Mathematics Teacher Educator*, the *Journal for Research in Mathematics Education*, or one of the NCTM school journals. Proposals must address the design of the project, the plan for collecting and analyzing data, and the anticipated impact on students’ learning. To be eligible, applicants must be a current NCTM member (on or before October 15, 2016) or teach at a school having a current NCTM PreK-8 school membership. The college or university mathematics educator also must be a member of NCTM.

- URL: <http://www.nctm.org/Grants-and-Awards/Grants/Pre-K-6-Classroom-Research-Grants/>

ENGINEERING, MATHEMATICS & PHYSICAL SCIENCES

Dispersed Computing

U.S. Dept. of Defense (DOD) - Defense Advanced Research Projects Agency (DARPA) - Information Innovation Office (I2O)

Due Date: 9/7/2016

DARPA is soliciting innovative research proposals in the area of algorithms and protocols for mission-aware computation and communication across broad-scale, physically dispersed computing infrastructure. Proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice. Dispersed Computing concepts have broad applicability to a variety of scenarios of interest to the United States military and to the broader community. Accordingly, responses to this BAA may consider a wide range of possible network and service contexts. However, proposers must be clear about the specific context(s) in which their solutions are applicable, the assumptions underlying the chosen context and technical approach, and the potential limitations of the approach. Solutions that have relatively broad applicability will be viewed favorably. Performers will be responsible for devising and implementing their own project-specific experimentation and demonstration capabilities. Proposers must include the following information in their submissions:

- A description of the planned testing environment and how it will illuminate advances in computation and/or networking capabilities relevant to their chosen contexts during the course of the program.
- A plan for conducting periodic demonstrations consistent with the notional program schedule
- A description of metrics to be used to assess the performance of their systems, along with a timetable and methodology for such assessments. To support plans for periodic demonstrations, projects may include the development of novel applications whose features help to showcase the unique value of the dispersed computing architectures.

The Dispersed Computing program seeks truly innovative, revolutionary approaches to missionaware computation and networked communication, as opposed to incremental or evolutionary advances to current art. Proposals must clearly articulate why their solutions represent a major advance over existing techniques. **DARPA-BAA-16-41**

- **URL:** <http://www.grants.gov/web/grants/view-opportunity.html?oppld=285415>

Centers for Chemical Innovation (CCI)

National Science Foundation (NSF)

Due Date: Preliminary Proposals 9/15/2016; Full Proposals 3/14/2017

The CCI Program supports research centers focused on major, long-term fundamental chemical research challenges. CCIs that address these challenges will produce transformative research, lead to innovation, and attract broad scientific and public interest. CCIs are agile structures that can respond rapidly to emerging opportunities and make full use of cyberinfrastructure to enhance collaborations. CCIs may partner with researchers from industry, government laboratories and international organizations. CCIs integrate research, innovation, education, and informal science communication and include a plan to broaden participation of underrepresented groups. CCI awards support the formation and development (Phase I) or sustained funding (Phase II) of research centers that can address major research challenges in fundamental chemistry. Successful centers will tackle challenges of large scope and impact, producing transformative research leading to innovation and enhanced economic competitiveness. CCI awards will bring researchers with shared and complementary interests into productive contact to nurture a culture of risk-taking and innovation. In FY 2015, the Division of Chemistry is considering only eligible Phase II CCI proposals. CCIs may partner with researchers from industry, national laboratories and international organizations. See detailed guidance in the NSF solicitation for non-U.S. or non-academic researchers. CCIs are expected to integrate their research with activities that broaden the impact of their research. The following integrative elements are required throughout the lifetime of a CCI award:

- **Innovation** - translation or transfer of basic research results into social or economic benefit. This element includes intellectual property protection and a proactive plan to either engage industry in technology transfer or to commercialize technology in other ways;
- **Education and Professional Development** - education and professional development for undergraduate and graduate students supported by the grant, including co-mentorship or other collaborative training. Continued professional development and mentoring for postdoctoral research associates. Education in various aspects of innovation (intellectual property, entrepreneurship, etc.). Other education activities (i.e., new course materials or curricula) that affect the university or universities involved in the CCI;
- **Broadening the participation of underrepresented groups** - CCI goals for increasing diversity, plans for reaching those goals, and an evaluation strategy;
- **Informal science communication** - plans for communicating the CCI research to public audiences and possible ways to evaluate the impact of these outreach efforts.

Effective center management plans include careful evaluation of the research and integrative elements, allocation of resources, the ability to initiate new lines of research and terminate support for less effective ones, and to promote communication throughout the center and with partners.

Investigators are strongly urged to contact a cognizant Program Officer when considering submitting a proposal. **NSF 16-568**

- URL: <http://www.nsf.gov/pubs/2016/nsf16568/nsf16568.htm>

Biomechanics and Mechanobiology (BMMB)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/16/2017

The BMMB Program supports fundamental research in biomechanics and mechanobiology. An emphasis is placed on multiscale mechanics approaches in the study of organisms that integrate across molecular, cell, tissue, and organ domains. The influence of *in vivo* mechanical forces on cell and matrix biology in the histomorphogenesis, maintenance, regeneration, and aging of tissues is an important concern. In addition, the relationships between mechanical behavior and extracellular matrix composition and organization are of interest. 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 14-7479**

- **URL:**http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13523&WT.mc_id=USNSF_39&WT.mc_ev=click

Design of Engineering Material Systems (DEMS)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

The Design of Engineering Material Systems (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:**http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504809&WT.mc_id=USNSF_39&WT.mc_ev=click

Engineering and Systems Design (ESD)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

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 14-1464**

- [URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13340&WT.mc_id=USNSF_39&WT.mc_ev=click](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13340&WT.mc_id=USNSF_39&WT.mc_ev=click)

Manufacturing Machines and Equipment (MME)

National Science Foundation (NSF)

Due Date: 9/15/2015, 2/16/2016

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. Of particular interest are proposals that relate to the manufacture of equipment and facilities that enable the production of energy products. 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. All proposals must include a statement outlining the societal benefits of the proposed activities, including the proposed research, in a separate section labeled “Broader Impacts of the Proposed Work”. **PD 15-1468**

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

Materials Engineering and Processing (MEP)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

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. Research plans driven by scientific hypotheses are encouraged. Material structures across length scales ranging from nano to meso to macro are of interest. Research on materials in the bulk or in special configurations such as surfaces or interfaces is appropriate as are research proposals related to surface engineering or tribology. Analytical, experimental, and/or numerical studies are supported. Collaborative proposals with industry (GOALI) are encouraged. **PD 13-8092**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504950&WT.mc_id=USNSF_39&WT.mc_ev=click

Mechanics of Materials and Structures (MOMS)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

The Mechanics of Materials and Structures (MOMS) 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. **PD 15-1630**

- **URL:**http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13355&WT.mc_id=USNSF_39&WT.mc_ev=click

Nanomanufacturing (NM)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

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. **PD 14-1788**

- **URL:**http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13347&WT.mc_id=USNSF_39&WT.mc_ev=click

Structural and Architectural Engineering (SAE)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/16/2017

The overall goal of the Structural and Architectural Engineering (SAE) program is to evolve sustainable structures, such as buildings, that can be continuously occupied and /or operational during the structure's useful life. The SAE program supports fundamental research for advancing knowledge and innovation in structural and architectural engineering that enables holistic approach to design, construction, operation, maintenance, retrofit, repair and end-of-life disposal of structures. For buildings, holistic approach incorporates the foundation-structure-envelope-nonstructural system, as well as the façade and roofing. 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; deterioration due to fatigue and corrosion; serviceability concerns due 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. **PD 15-1637**

- **URL:**http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13358&WT.mc_id=USNSF_39&WT.mc_ev=click

Systems Science (SYS)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/15/2017

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 14-8085**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504788&WT.mc_id=USNSF_39&WT.mc_ev=click

Focused Research Groups in the Mathematical Sciences (FRG)

National Science Foundation (NSF)

Due Date: 9/27/2016

The purpose of the Focused Research Group activity is to support collaborative groups employing innovative methods to solve specific, major research challenges in the mathematical sciences. A major challenge is an outstanding problem of significant importance that requires the focused and synergistic efforts of a collaborative group to solve, and whose solution will have wide impacts in the mathematical sciences and potentially in other areas. Groups may include, in addition to statisticians and mathematicians, researchers from other science and engineering disciplines appropriate for the proposed research. Risky projects are welcome. Interdisciplinary projects are welcome. Projects should be timely, limited in duration to up to three years, and substantial in their scope and impact for the mathematical sciences. Funded projects that show substantial progress in their first two years may be recommended for a creativity extension for up to an additional two years. NSF 16-577

- URL: <http://www.nsf.gov/pubs/2016/nsf16577/nsf16577.htm>

Simons Fellows in Mathematics Program

Simons Foundation

Due Date: 9/29/2016

This program enables research leaves providing time away from classroom teaching and academic administration. Research leaves from classroom teaching and administrative obligations can provide strong intellectual stimulation and lead to increased creativity and productivity in research. This

program is intended to make leaves more productive by enabling the extension of sabbatical leaves from one academic term to a full academic year.

- URL: <https://www.simonsfoundation.org/funding/funding-opportunities/mathematics-physical-sciences/simons-fellow-program/simons-fellows-in-mathematics-program-description/>

Simons Fellows in Theoretical Physics Program

Simons Foundation

Due Date: 9/29/2016

This program enables research leaves providing time away from classroom teaching and academic administration. Research leaves from classroom teaching and administrative obligations can provide strong intellectual stimulation and lead to increased creativity and productivity in research. This program is intended to make leaves more productive by enabling the extension of sabbatical leaves from one academic term to a full academic year.

- URL: <https://www.simonsfoundation.org/funding/funding-opportunities/mathematics-physical-sciences/simons-fellow-program/simons-fellows-in-theoretical-physics-program-description/>

Chemical Structure, Dynamics and Mechanisms (CSDM-A & CSDM-B)

National Science Foundation (NSF)

Due Date: 9/30/2016

The CSDM Program supports research on the nature of molecular structure and its consequences for reactivity, intermolecular interactions, and dynamics. Chemical dynamics is defined to encompass reaction kinetics and mechanisms, intramolecular rearrangement or conformational changes, and changes induced via electromagnetic excitation. While the majority of projects supported by CSDM are experimental in nature, the Program is receptive to research focused on utilizing applied computational methods. However, the proposer should establish a high degree of relevance to the understanding of existing experimental data. The CSDM Program is concerned primarily with chemical phenomena in the gas and fluid phases, as well as chemical processes at gas-fluid, gas-solid, fluid-solid, and fluid-fluid interfaces. Proposals concerned with solid phase chemical processes are generally not supported by the Program. Proposals concerned with structure, dynamics or mechanisms as they pertain to catalytic processes should submit to the Chemical Catalysis Program (CHE/CAT). Proposals whose primary questions relate to phenomena arising from the properties of nanoscale materials or assemblies should be submitted to the Macromolecular, Supramolecular, and Nanochemistry Program (CHE/MSN). CSDM supports research projects that have strong implications for advancing the foundational physical models of chemical structure and dynamics. Projects focusing on device or process optimization are



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not supported by the Program. The CSDM Program is divided into two sub-programs, CSDM-A and CSDM-B. The two programs will inevitably overlap in some instances. At coarse resolution, they are separable in terms of (i) molecular complexity, (ii) time scale, (iii) strength of the interactions, and (iv) links to potential applications. The individual Program Descriptions are intended to guide the proposer to the most appropriate sub-program for his/her research. If additional guidance is required, Principal Investigators are encouraged to send brief electronic summaries of their research to CSDM Program Directors prior to formal proposal submission. After Programmatic review of the summaries, Principal Investigators will be given advice as to the appropriateness of the research for CSDM, and if appropriate, the best sub-program (CSDM-A or CSDM-B) for submission.

CSDM-A - Research supported by this program generally seeks to develop and refine our quantitative understanding of molecular structure, reactivity and dynamics. The most successful proposals will be those which describe research that has the potential to change how we think about chemical structure and dynamics in general, as opposed to the behavior of a specific class of molecules or reactions. CSDM-A research often involves the development of experimental techniques that extend the limits of short time scales or spectral resolution. When the development of such capabilities is the primary focus (rather than the pursuit of specific new insights they may enable), the work is probably better suited to the Chemical Measurement and Imaging program. Examples of topics recently funded in CSDM-A include femtosecond time-resolved studies of solvent effects on reaction dynamics, photoelectron spectroscopy of gas phase ions and clusters, nonlinear vibrational spectroscopy of liquid-liquid interfaces, diffraction/scanning probe studies of molecular adsorbates on metal surfaces, and the molecular modeling of clathrate hydrate growth. **PD 12-9101**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504796

CSDM-B - Research supported in this program seeks to map specific molecular structures to their chemical reactivities and/or chemical properties. It often involves complex chemical systems and may contain a substantial amount of chemical synthesis. While the CSDM-A portfolio includes phenomena that are tracked with ultrafast methods, research supported under CSDM-B extends to time scales dictated by reaction kinetics. CSDM-B proposals generally utilize existing experimental techniques as opposed to developing new ones. Topics of interests to CSDM-B include (but are not limited to) mechanistic studies of organometallic, organic, and inorganic reactions, chemistry of reactive intermediates, mechanistic studies of energy-related processes, and the interaction of light and electrons with chemical structures. Examples of recently funded projects in CSDM-B include mechanistic studies directed toward universal ligands and catalytic reactions of samarium diiodide, charge delocalization and mobility in ground and photoexcited states of conjugated systems, reactivity of 1,2-diradicals, shape-responsive fluorophores, computational studies of cycloaddition reactions, photophysical properties of spin-polarized molecules, and photorelease of stable molecules. **PD 12-9102**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504807

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Dear Colleague Letter - Exploratory Research on High-Efficiency, Monolithic, Two Dissimilar Materials (TDM) Photovoltaics

National Science Foundation (NSF)

Due Date: 9/30/2016

With this Dear Colleague letter (DCL), the Division of Electrical, Communications and Cyber Systems (ECCS) within Engineering Directorate of the National Science Foundation (NSF) announces its interest in receiving EARly-Concept Grants for Exploratory Research (EAGER) proposals aimed to enable solar cells with energy conversion efficiency reaching 30% and beyond. ***he purpose of this DCL is to support innovative, exploratory research in materials, fabrication processes, device structure and integration of monolithic, TDM solar cells to achieve energy conversion efficiency beyond 30% at one SUN with cost-effective manufacturability.*** NSF 16-108

- URL: http://www.nsf.gov/pubs/2016/nsf16108/nsf16108.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

Mathematics Travel Grants for Women Researchers

Association for Women in Mathematics (AWM)

Due Dates: 10/1/2016, 2/1/2017, 5/1/2017

Mathematics Travel Grants enable women mathematicians to attend conferences in their fields provides them a valuable opportunity to advance their research activities and their visibility in the research community. Having more women attend such meetings also increases the size of the pool from which speakers at subsequent meetings may be drawn and thus addresses the persistent problem of the absence of women speakers at some research conferences. The Mathematics Travel Grants provide full or partial support for travel and subsistence for a meeting or conference in the applicant's field of specialization.

- URL: <https://sites.google.com/site/awmmath/programs/travel-grants/mathematics-travel-grants>

Mathematics Education Research Travel Grants

Association for Women in Mathematics (AWM)

Due Dates: 10/1/2016, 2/1/2017, 5/1/2017

There are a variety of reasons to encourage interaction between mathematicians and educational researchers. National reports recommend encouraging collaboration between mathematicians and

researchers in education and related fields in order to improve the education of teachers and students. Communication between mathematicians and educational researchers is often poor and second-hand accounts of research in education can be misleading. Particularly relevant to the AWM is the fact that high-profile panels of mathematicians and educational researchers rarely include women mathematicians. The Mathematics Education Research Travel Grants provide full or partial support for travel and subsistence for:

- mathematicians attending a research conference in mathematics education or related field
- researchers in mathematics education (or related field) attending a mathematics conference.

(Please note that mathematics education researchers attending mathematics education research conferences are not eligible for this grant.)

- URL: <https://sites.google.com/site/awmmath/programs/travel-grants/mathematics-education-research-travel-grants>

Simons Collaborations in Mathematics and the Physical Sciences

Simons Foundation

Due Date: Letters of Intent 10/1/2016; Full Proposals 2/28/2017

The aim of this 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 their 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 be organized and managed in a manner engendering a high level of collaboration. Each collaboration is led by a collaboration director, who is expected to determine the scientific agenda, to coordinate the scientific activities of the other members, to determine (in collaboration with the other members) the scientific themes, and to organize collaboration meetings and activities as appropriate, including a one-day annual conference at the foundation. The director will be the foundation's main point of contact for the activities of the collaboration and will be responsible for coordinating all administrative deliverables. The director is also responsible for monitoring the overall progress of the research effort and deciding on research directions and personnel as the collaboration evolves. PIs are expected to perform research that advances the goals of the collaboration and to collaborate as appropriate with other members of the collaboration. PIs are also expected to assist the director and other PIs in fulfilling the additional

collaboration obligations outlined above. Attendance at the annual conference, monthly meetings, and other lectures is expected for each collaboration member.

- URL: <https://www.simonsfoundation.org/funding/funding-opportunities/mathematics-physical-sciences/simons-collaborations-in-mathematics-and-the-physical-sciences/>

Computer and Network Systems (CNS): Core Programs

National Science Foundation (NSF)

Due Date: 10/19/2016 (Medium & Large Projects); 11/16/2016 (Small Projects)

CISE's Division of Computer and Network Systems (CNS) supports research and education projects that develop new knowledge in two core programs:

- Computer Systems Research (CSR) program; and
- Networking Technology and Systems (NeTS) program.

Proposers are invited to submit proposals in three project classes, which are defined as follows:

- Small Projects - up to \$500,000 total budget with durations up to three years;
- Medium Projects - \$500,001 to \$1,200,000 total budget with durations up to four years; and
- Large Projects - \$1,200,001 to \$3,000,000 total budget with durations up to five years.

NSF 16-579

- URL: <http://www.nsf.gov/pubs/2016/nsf16579/nsf16579.htm>

Computing and Communication Foundations (CCF): Core Programs

National Science Foundation (NSF)

Due Date: 10/19/2016 (Medium & Large Projects); 11/16/2016 (Small Projects)

CISE's Division of Computing and Communication Foundations (CCF) supports research and education projects that develop new knowledge in three core programs:

- The Algorithmic Foundations (AF) program;
- The Communications and Information Foundations (CIF) program; and
- The Software and Hardware Foundations (SHF) program.

Proposers are invited to submit proposals in three project classes, which are defined as follows:

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- Small Projects - up to \$500,000 total budget with durations up to three years;
- Medium Projects - \$500,001 to \$1,200,000 total budget with durations up to four years; and
- Large Projects - \$1,200,001 to \$3,000,000 total budget with durations up to five years.

NSF 15-573

- URL: <http://www.nsf.gov/pubs/2016/nsf16578/nsf16578.htm>

Secure and Trustworthy Cyberspace (SaTC)

National Science Foundation (NSF)

Due Date: 10/19/2016 (Medium & Large Projects); 11/16/2016 (Small Projects); 12/15/2016 (Cybersecurity Education)

The goals of the Secure and Trustworthy Cyberspace (SaTC) program are aligned with the [Federal Cybersecurity Research and Development Strategic Plan](#) (RDSP) and the [National Privacy Research Strategy](#) (NPRS) to protect and preserve the growing social and economic benefits of cyber systems while ensuring security and privacy. The RDSP identified six areas critical to successful cybersecurity R&D: (1) scientific foundations; (2) risk management; (3) human aspects; (4) transitioning successful research into practice; (5) workforce development; and (6) enhancing the research infrastructure. The NPRS, which complements the RDSP, identifies a framework for privacy research, anchored in characterizing privacy expectations, understanding privacy violations, engineering privacy-protecting systems, and recovering from privacy violations. In alignment with the objectives in both strategic plans, the SaTC program takes an interdisciplinary, comprehensive and holistic approach to cybersecurity research, development, and education, and encourages the transition of promising research ideas into practice. The SaTC program welcomes proposals that address cybersecurity and privacy, and draw on expertise in one or more of these areas: computing, communication and information sciences; engineering; economics; education; mathematics; statistics; and social and behavioral sciences. **Proposals that advance the field of cybersecurity and privacy within a single discipline or interdisciplinary efforts that span multiple disciplines are both encouraged.**

Proposals may be submitted in one of the following three project size classes:

- Small projects: up to \$500,000 in total budget, with durations of up to three years;
- Medium projects: \$500,001 to \$1,200,000 in total budget, with durations of up to four years;
- Large projects: \$1,200,001 to \$3,000,000 in total budget, with durations of up to five years.

In addition to the project size classes, proposals must be submitted pursuant to one of the following designations, each of which may have additional restrictions and administrative obligations as specified in this program solicitation.

- **CORE:** The main focus of the SaTC research program, spanning the interests of NSF's Directorates for Computer and Information Science and Engineering (CISE), Engineering (ENG), Mathematical and Physical Sciences (MPS), and Social, Behavioral and Economic Sciences (SBE). Interdisciplinary proposals are welcomed to CORE.
- **EDU:** The Education (EDU) designation will be used to label proposals focusing entirely on cybersecurity education. *Note that proposals that are designated as EDU have budgets limited to \$300,000 and durations of up to two years.*
- **STARSS:** The Secure, Trustworthy, Assured and Resilient Semiconductors and Systems (STARSS) designation will be used to label proposals that are submitted to the joint program focused on hardware security with the Semiconductor Research Corporation (SRC). *The STARSS designation may only be used for Small proposals. This designation has additional administrative obligations.*
- **TTP:** The Transition to Practice (TTP) designation will be used to label proposals that are focused exclusively on transitioning existing research results to practice. *The TTP designation may only be used for Small and Medium proposals.*

An individual can participate as a PI, co-PI or Senior Personnel on no more than three proposals, of which no more than two can be for Small, Medium, or Large projects (collectively, the TWC, SBE, STARSS and TTP perspectives), and no more than one can be a Cybersecurity Education project. (These limits apply per year to Small, Medium, Large, and Education proposals in response to this particular solicitation, and are unrelated to any limits imposed in other NSF solicitations.) **NSF 16-580**

- **URL:** <http://www.nsf.gov/pubs/2016/nsf16580/nsf16580.htm>

Biomaterials (BMAT)

National Science Foundation (NSF)

Due Date: 10/31/2016

The Biomaterials program supports fundamental materials research related to (1) biological materials, (2) biomimetic, bioinspired, and bioenabled materials, (3) synthetic materials intended for applications in contact with biological systems, and (4) the processes through which nature produces biological materials. Projects are typically interdisciplinary and may encompass scales from the nanoscopic to the bulk. They may involve characterization, design, preparation, and modification; studies of structure-property relationships and interfacial behavior; and combinations of experiment, theory, and/or simulation. The emphasis is on novel materials design and development and discovery of new phenomena. Projects involving in vitro demonstration of biological compatibility and efficacy are appropriate, but the program can support only limited in vivo studies. Tissue engineering and drug/gene delivery projects must have a specific focus on fundamental materials development and characterization. Studies of the mechanical behavior of hard and soft biological materials and tissues and projects in molecular biophysics may be more appropriate for one or more of the NSF programs

listed under Related Programs on the program page. Projects with an emphasis on device design and fabrication are generally more appropriate for a program in the NSF Engineering Directorate. PD 06-7623

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13699

Solid State and Materials Chemistry (SSMC)

National Science Foundation (NSF)

Due Date: 10/31/2016

This multidisciplinary program supports basic research in solid state and materials chemistry comprising the elucidation of the atomic and molecular basis for material development and properties in the solid state from the nanoscale to the bulk. General areas of interest include but are not limited to innovative approaches to design, synthesis, bulk crystal and/or film growth, and characterization of novel organic, inorganic, and hybrid materials, as well as liquid crystal materials and multi-component material systems exhibiting new phenomena and/or providing new scientific insights into structure/composition/property relationships in the solid state. Relevant topics include original material design principles, new approaches to assembly or crystalline material growth, characterization of new material phenomena or superior behavior, investigations of surface and interfacial effects on material system structures and properties, and unraveling the relationships between structure/composition (e.g. self- or program-assembled materials, crystalline material growth, and nanostructured material systems) and properties (e.g. charge, ionic, thermal or spin transport, exciton diffusion, chemical reactivity and selectivity, etc.). Development of new organic solid state materials, environmentally-safe and sustainable materials, and fundamental studies of novel material and material systems for efficient energy harvesting, conversion and storage are encouraged. The SSMC program works closely with other programs within the Division of Materials Research (DMR) and in the Mathematical and Physical Sciences (MPS) and Engineering (ENG) directorates to accommodate the multidisciplinary nature of proposal submissions. **PD 10-1762**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5356

HEALTH, LIFE & EARTH SCIENCES

Developing a National Research Infrastructure for Neuroscience (NeuroNex)

National Science Foundation (NSF)

Due Date: Letters of Intent 9/2/2016; Full Proposals 10/21/2016

Understanding the brain is one of the grand scientific challenges at the intersection of experimental, theoretical, and computational investigation in the life, physical, behavioral, and cognitive sciences. Rapid proliferation of advanced measurement instrumentation and techniques has allowed researchers to study the brain and behavior at ever finer physical and temporal scales and in broader social and environmental contexts. At the same time, achieving a comprehensive, transformational understanding of the brain in action and in context will require an increased emphasis on systematic, interdisciplinary collaboration and team science, and the increased use of theoretical frameworks, including evolutionary ones, to explore questions that span organizational levels, scales of analysis, and a wider range of species optimal for experimental exploration of brain function. To catalyze such understanding, NSF announced its intention to support the development of innovative, accessible, and shared capabilities and resources towards the establishment of a coherent national infrastructure for neuroscience research, as described in the Dear Colleague Letter NSF 16-047. The goal of this solicitation is to foster the development and dissemination of (1) innovative research resources, instrumentation, and neurotechnologies, and (2) theoretical frameworks for understanding brain function across organizational levels, scales of analysis, and/or a wider range of species, including humans. This interdisciplinary program is one element of NSF's broader effort directed at Understanding the Brain, a multi-year activity that includes NSF's participation in the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative (<http://www.nsf.gov/brain/>) and the phased approach to develop a national research infrastructure for neuroscience as outlined in the Dear Colleague Letter NSF16-047. NSF envisions a connected portfolio of transformative, integrative projects that create synergistic links across investigators and communities, yielding novel ways of tackling the challenges of understanding the brain in action and in context. This program solicits proposals that will develop and disseminate innovative neurotechnologies and/or theoretical frameworks that will transform our understanding of the linkages between neural activity and cognition and behavior across different systems, environments, and species, while also providing an avenue for widespread dissemination of these technologies and theoretical frameworks as well as broad training opportunities. **NSF 16-569**

- URL: <http://www.nsf.gov/pubs/2016/nsf16569/nsf16569.htm>

PCORI Funding Announcement: Assessment of Prevention, Diagnosis, and Treatment Options
Patient-Centered Outcomes Research Institute (PCORI)
Due Date: Letters of Intent 9/14/2016 (Cycle 3 opens August 15, 2016); Applications
12/19/2016

PCORI is seeking applications designed to provide information to inform critical decisions that face patients and caregivers, clinicians, policy makers, and healthcare system leaders. These decisions must be consequential and occurring now in the absence of sound evidence about the comparative effectiveness of alternative approaches. There must be substantial potential for patients and caregivers to benefit from the new knowledge in ways that are important to them. The premise of this research is that the new knowledge will inform critical choices of patients and stakeholders in health care. This knowledge will provide insight about the comparative benefits and harms of the options and provide information about outcomes that are important to patients.

Research of Interest: Comparative Clinical Effectiveness

Patients, caregivers, and clinicians often lack the appropriate evidence required to make the best choices regarding prevention, screening, diagnosis, monitoring, or treatment. Where therapies or technologies have been approved and marketed, there are often gaps in research comparing their effectiveness with that of other clinical options, and prior research may not have included outcomes that are important to patients and their caregivers. In addition, the existing evidence base may not be relevant for certain patient populations, such as those at the extremes of age or with multiple comorbid conditions.

For this particular PFA on the Assessment of Prevention, Diagnosis, and Treatment Options, PCORI seeks to fund investigator-initiated research that:

- Compares the effectiveness of two or more strategies for prevention, treatment, screening, diagnosis, or management that are known to be efficacious but have not been adequately compared in previous studies; interventions without sufficient evidence of efficacy will be considered only when they are in reasonably common use. PCORI is particularly interested in studies that are conducted in typical clinical populations and that address the full range of relevant patient-centered outcomes (PCOs)
- Addresses a high-priority evidence gap, as identified by prior systematic reviews, clearly defined gaps in clinical guidelines, or other credible evidence reviews
- Investigates, among compared groups, factors that account for variation in treatment outcomes, with attention paid to demographic, biological, clinical, social, economic, or geographic factors, comorbidities, and other factors that may influence those outcomes; strategies may focus on patient populations with a single condition or involve patients with a range of conditions

For this PCORI Funding Announcement (PFA), proposed projects should address the comparison of specific clinical services or strategies that are clearly defined and can be replicated in other clinical settings with minimal adaptations or changes. PCORI does not encourage projects that have the

primary goal of developing and testing decision aids or testing the use of lay personnel who perform ancillary services in healthcare settings.

This funding opportunity is broad-based and is not confined to specific clinical services or patient populations. However, the program's goal is to expand the evidence base that pertains to clinical services that would be chosen by clinicians, patients, and caregivers in usual clinical delivery settings.

The services of interest include:

- Prescription drugs and biologics
- Surgical and other interventional procedures
- Techniques for disease screening
- Vaccinations and other interventions to prevent diseases
- Counseling and behavioral interventions
- Complementary and integrative services
- Rehabilitative services
- Diagnostic tests and procedures

- **URL:** <http://www.pcori.org/funding-opportunities/announcement/assessment-prevention-diagnosis-and-treatment-options-cycle-3-2016>

PCORI Funding Announcement: Improving Healthcare Systems

Patient-Centered Outcomes Research Institute (PCORI)

Due Date: Letters of Intent 9/14/2016 (Cycle 3 opens August 15, 2016); Applications 12/19/2016

The Improving Healthcare Systems (IHS) Program within PCORI invites applications for research that studies the comparative effectiveness of alternative features of healthcare systems (e.g., innovative technologies, incentive structures, or healthcare service delivery designs) that are intended to optimize the quality, outcomes, and efficiency of patient care and that have the greatest potential for sustained impact and replication within and across healthcare systems. Healthcare systems encompass multiple levels (e.g., individual patients, family and social supports, providers and care teams, organizations or practice settings, local community resources, and the state- and national-level policy environments) and include entities organized to deliver, arrange, purchase, or coordinate health services. Healthcare delivery models (e.g., integrated health system, patient-centered medical home) and settings of care (e.g., hospital, physician practice, nursing home, community health clinic, patient's home) also define healthcare system operations. PCORI seeks studies that will affect healthcare delivery by determining which system features lead to improved Patient-Centered Outcomes (PCOs) and which provide valuable knowledge to patients, their caregivers, and clinicians, as well as other key stakeholders, including payers and employers. Applicants should note that, although National Health Environment

and State Health Environment clearly influence and shape the broader health policy environment, PCORI does not include them as specific targets for research interventions. IHS seeks to fund comparative effectiveness research (CER) that addresses the areas that IOM addresses.

Interventions designed to achieve the IOM aims listed above may target:

- Technology (e.g., interoperative electronic health records [EHRs], telemedicine, patient-accessible health records)
- Patient incentives (e.g., free or subsidized preventive care, automatic enrollment in certain follow-up programs)
- Provider incentives (e.g., free continuing medical education units for certain courses, reduced paperwork, provision of key comparative quality performance information); only non-financial incentives are acceptable for providers
- Organizational models and policies within and across healthcare systems (e.g., patient-centered medical homes, standing orders)
- Personnel (e.g., multidisciplinary teams, peer navigators, community health workers)

Although personnel is a key area of intervention, the IHS portfolio is already filled with a broad representation of personnel-focused interventions designed to transform existing delivery systems. This includes patient navigator and community health worker interventions. Thus, unless the personnel intervention is part of a multicomponent intervention, or addresses issues of multidisciplinary teams, IHS is not interested in funding additional applications whose primary intervention focuses solely on the inclusion of personnel. Innovation and changes in healthcare systems and in the behavior of healthcare system participants are often driven by economic, political, and social needs to improve access to care or quality of care, to attract patients or enrollees, and to contain costs. The effects of all such innovations may vary considerably among subgroups of the general population, but this heterogeneity of treatment effect (HTE) is often inadequately measured. Studies that include adequately powered subgroup analysis and address understudied or underrepresented patient populations in research are of particular interest to PCORI and the IHS Program. See the Populations Studied section below.

Research of Interest

PCORI seeks to fund investigator-initiated research on the effects of system changes on the broad outcomes listed below. We are especially interested in studies that conduct head-to-head comparisons with or without "usual care" as a comparator (see the Requirements for PCORI Research section for more on usual care), such as:

- Patients' access to care, high quality of care, support for self-care, and coordination of care across healthcare settings
- Professional decision making on the basis of patients' personal values
- Experiences that are important to patients and their caregivers, such as overall health, functional ability, health-related quality of life, stress, severity of symptoms, survival, and unanticipated healthcare utilization, such as unexpected hospital stays or visits to the emergency department (ED)

- The efficiency of healthcare delivery, as measured by the amount of ineffective, duplicative, or wasteful care provided to patients

The IHS Program is particularly interested in testing practices that combine evidence-based guidelines (such as Choosing Wisely, <http://www.choosingwisely.org/>) with patient incentives, provider incentives, or patient and provider incentives combined, to elicit patient preferences and reduce harms faced by patients simultaneously.

The IHS Program is also interested in funding studies that:

- Leverage existing research resources, such as adding PCOR to an existing large clinical trial, using established practice-based research networks, or analyzing large databases that contain valuable, relevant information that may be used to answer important CER questions
- Leverage healthcare system resources in support of some or all of the requirements for the intervention. Especially attractive is the possibility of broader and sustained impact through potential adoption by participating or supporting healthcare organizations and stakeholders (e.g., payers), should the intervention prove effective

- URL: <http://www.pcori.org/funding-opportunities/announcement/improving-healthcare-systems-cycle-3-2016>

Recognition Grants

Kansas Health Foundation (NHF)

Due Date: 9/15/2016, 6/15/2017

Recognition Grants expand the Kansas Health Foundation's support to a broad range of organizations throughout the state. While the majority of the Foundation's funding is through invited proposals, the Recognition Grants program is designed to fund unsolicited requests. It is targeted for organizations and agencies proposing meaningful and charitable projects that fit within the Foundation's mission of improving the health of all Kansans. In addition to supporting projects, the Foundation also seeks to support initiatives that focus on promoting policy, systems and environmental (PSE) transformations that support health. PSE initiatives that affect all aspects of health, including social factors that contribute to a healthy population may be considered. Funding may be used to support the following activities of the proposed initiative: strategic communication, coalition building, data collection to inform or support an initiative, or non-lobbying advocacy actions.

- URL: <http://kansashealth.org/grantmaking/recognitiongrants>

Exploratory Grants in Cancer Epidemiology and Genomics Research (R21)

National Institutes of Health (NIH) - National Cancer Institute (NCI)

Due Date: 10/16/2016, 2/16/2017, 6/16/2017 (standard NIH due dates apply)

This funding opportunity announcement (FOA) invites applications for research on cancer epidemiology, genomics, and risk assessment. The overarching goal is to provide support to promote the early and conceptual stages of research efforts on novel scientific ideas that have the potential to substantially advance cancer research, such as improving epidemiologic study data collection; validating measurement of exposures in body fluids and tissues; applying epigenetic or metabolomic approaches to cancer epidemiology research; developing and applying novel strategies for discovery of risk variants for rare cancers; understanding the population genetic architecture of cancer in understudied populations; or validating methods to extract, collect, and synthesize clinical data via electronic medical records for use in observational studies of cancer patients and survivors. This FOA will utilize the exploratory/developmental research grant (R21) mechanism to foster cancer etiology and epidemiology research. While these studies may involve considerable risk, they may also lead to a breakthrough in a particular area, and to the development of novel techniques, agents, methodologies, models, or applications that could have a major impact on a field of cancer research (epidemiologic, biomedical, behavioral, or clinical). **PA-16-175**

- URL: <http://grants.nih.gov/grants/guide/pa-files/PA-16-175.html>

Noise-Induced Cochlear Synaptopathy: Basic Studies Informing Potential Therapies (R01)

National Institutes of Health (NIH) - National Institute on Deafness and Other Communication Disorders (NIDCD)

Due Date: 11/6/2016; 7/3/2017 (Optional Letters of Intent due 30 days prior to the application due date)

This Funding Opportunity Announcement (FOA) invites research applications that will further our understanding of the cellular and subcellular basis of noise-induced cochlear synaptopathy. Such studies will increase our basic understanding of noise-induced cochlear synaptopathy as well as inform potential therapies. **PAR-16-170**

- URL: <https://grants.nih.gov/grants/guide/pa-files/PAR-16-170.html>

R40 Maternal and Child Health Research Program (MCHR) (R40 MCH Secondary Data Analysis Studies (SDAS))

U.S. Dept. of Health and Human Services (HHS) - Health Resources and Services Administration (HRSA) - Maternal and Child Health Bureau (MCHB)

Due Date: 11/6/2016

The Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau/ Office of Epidemiology and Research is accepting applications for fiscal year (FY) 2016 R40 Maternal and Child Health Research program. The purpose of this grant program is to support applied research and analyses studies relating to maternal and child health services, that have the potential to improve health services and delivery of care for maternal and child health populations. The R40 MCH SDAS program supports applied research relating to maternal and child health services that utilizes exclusively the secondary analysis of existing national databases and/or administrative records. These projects should have the potential to improve health services and delivery of care for maternal and child health populations. Findings from the research supported by the MCH Research Program are expected to strengthen and expand Affordable Care Act (ACA) implementation. This includes research that drives policy and service delivery of preventive and early intervention services for application in health care delivery programs or develops new knowledge on the impact of insurance coverage on health promotion. **HRSA-16-029**

- **URL:** <http://www.grants.gov/web/grants/view-opportunity.html?oppld=278824>

MULTIPLE DISCIPLINES

Science of Science of Innovation Policy (SciSIP)

National Science Foundation (NSF)

Due Date: 9/29/2016, 2/9/2017

The Science of Science & Innovation Policy (SciSIP) program supports research designed to advance the scientific basis of science and innovation policy. The program funds research to develop models, analytical tools, data and metrics that can be applied in the science policy decision making process and concern the use and allocation of scarce scientific resources. For example, research proposals may develop behavioral and analytical conceptualizations, frameworks or models that have applications across the broad array of science and innovation policy challenges. Proposals may also develop

methodologies to analyze science, technology and innovation data, and to usefully convey that information to a variety of audiences. Proposals that create and improve science, engineering and innovation data, including the design of new metrics and indicators, particularly proposals that demonstrate the viability of collecting and analyzing data on knowledge generation and innovation in organizations, are encouraged. The SciSIP program welcomes proposals from individual or multi-investigator research projects, doctoral dissertation improvement awards, experimental research, and data collection and dissemination. The SciSIP program places a high priority on interdisciplinary research. The program places a high priority on broadening participation and encourages proposals from junior faculty, women, other underrepresented minorities, Research Undergraduate Institutions, and EPSCoR states. The program also supports small grants that are time-critical and small grants that are high-risk and of a potentially transformative nature (see Chapter II.D.2 of the NSF Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg) for guidance on submitting Grants for Rapid Response Research (RAPID) and EARly-concept Grants for Exploratory Research (EAGER)). The SciSIP program funds conferences and interdisciplinary research activities that strengthen research topic ideation and dissemination among the social and behavioral sciences, policy community and the larger scientific community. **PD 09-7626**

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501084

Science of Science of Innovation Policy Doctoral Dissertation Research Improvement Grants (SciSIP-DDRIG)

National Science Foundation (NSF)

Due Date: 9/29/2016, 2/9/2017

The Science of Science & Innovation Policy (SciSIP) program supports research designed to advance the scientific basis of science and innovation policy. The program funds research to develop models, analytical tools, data and metrics that can be applied in the science policy decision making process and concern the use and allocation of scarce scientific resources. For example, research proposals may develop behavioral and analytical conceptualizations, frameworks or models that have applications across the broad array of science and innovation policy challenges. Proposals may also develop methodologies to analyze science, technology and innovation data, and to usefully convey that information to a variety of audiences. Proposals that create and improve science, engineering and innovation data, including the design of new metrics and indicators, particularly proposals that demonstrate the viability of collecting and analyzing data on knowledge generation and innovation in organizations, are encouraged. The SciSIP program welcomes proposals from individual or multi-investigator research projects, doctoral dissertation improvement awards, experimental research, and data collection and dissemination. The SciSIP program places a high priority on interdisciplinary research as well as on broadening participation and encourages proposals from junior faculty, women, other underrepresented minorities, Research Undergraduate Institutions, and EPSCoR states. The Doctoral Dissertation Research Improvement Grants funding opportunity is designed to improve the

quality of dissertation research. DDRIG awards provide funds for items not normally available through the student's university such as enabling doctoral students to undertake significant data-gathering projects and to conduct field research in settings away from their campus. DDRIGs do not provide cost-of-living or other stipends or tuition. Outstanding DDRIG proposals specify how the knowledge to be created advances science and innovation policy. **The PI must be the advisor of the doctoral student or a faculty member at the U.S. university where the doctoral student is enrolled. The doctoral student will be the Co-PI. NSF 15-583**

- URL: http://www.nsf.gov/pubs/2015/nsf15583/nsf15583.htm?WT.mc_id=USNSF_25&WT.mc_ev=click

Infrastructure Management and Extreme Events (IMEE)

National Science Foundation (NSF)

Due Date: 9/15/2016, 2/16/2017

The IMEE program supports fundamental, multidisciplinary research on the impact of hazards and extreme events upon civil infrastructure and society. The program is focused upon research on the mitigation of, preparedness for, response to, and recovery from multi-hazard disasters. Community and societal resilience and sustainability are important topics within the research portfolio of IMEE. The program is deeply multidisciplinary and attempts to integrate multiple issues from civil, mechanical, transportation, and system engineering, sociology, psychology, economics, geography, political science, urban planning, epidemiology, natural and physical science, and computer science. With regard to the four core emphasis areas of mitigation, preparedness, response and recovery, a variety of topics are supported. The following list provides examples of the kinds of topics and issues that may be supported, though the list is not exhaustive and other, innovative topics may be proposed. Mitigation research may focus upon issues such as the analysis of structural and non-structural mitigation effectiveness, local capacity building for risk reduction, and social and physical vulnerability analyses. Preparedness research may involve studies on warning and risk communication, evacuation, multi-hazard emergency planning, and the effectiveness of pre-disaster planning. Response research may examine such issues as infrastructure interdependencies and cascading disasters, innovation and improvisation in emergency management, and the use of new communication technology and social media in emergency management. Recovery research may examine linking disaster recovery to the mitigation of future disasters, resilience metrics and models, resilience of interdependent infrastructure processes and systems, and social factors related to economic recovery and resilience.

PD 15-1638

- URL: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13353

NEW FACULTY / INVESTIGATOR

NSF Astronomy and Astrophysics Postdoctoral Fellowships (AAPF)

National Science Foundation (NSF)

Due Date: 10/12/2016

These postdoctoral fellowships provide an opportunity for highly qualified, recent doctoral scientists to carry out an integrated program of independent research and education. Fellows may engage in observational, instrumental, theoretical, laboratory or archival data research in any area of astronomy or astrophysics, in combination with a coherent educational plan for the duration of the fellowship. The program supports researchers for a period of up to three years with fellowships that may be taken to eligible host institution(s) of their choice. The program is intended to recognize early-career investigators of significant potential and to provide them with experience in research and education that will establish them in positions of distinction and leadership in the community. **NSF 16-575**

- URL: http://nsf.gov/funding/pgm_summ.jsp?pims_id=5291

Mathematical Sciences Postdoctoral Research Fellowships (MSPRF)

National Science Foundation (NSF)

Due Date: 10/19/2016

The purpose of the MSPRF is to support future leaders in mathematics and statistics by facilitating their participation in postdoctoral research environments that will have maximal impact on their future scientific development. There are two options for awardees: Research Fellowship and Research Instructorship. Awards will support research in areas of mathematics and statistics, including applications to other disciplines. **NSF 16-558**

- URL: <http://www.nsf.gov/pubs/2016/nsf16558/nsf16558.htm>