

# FUNDING OPPs & INFO

For Hajim School Researchers



June 27, 2016

## FUNDING OPPORTUNITIES

### Internal Funding

**PumpPrimer II:** Innovative and high-risk projects.

**Deadline: July 1, 2016**

The increasingly competitive environment for extramural funding increases the need for proof of concept and/or pilot data in proposals and reduces funding for high-risk proposals. To help faculty secure extramural funding for bold new research directions, my office will provide funding for up to one year.

·Typical budgets will be \$1-20K. In rare instances, budgets as large as \$50K may be awarded.

·Cost-sharing with departmental resources is encouraged.

Applicants for both PumpPrimer I and II are expected to submit a proposal for external funding within 18 months of the allocation of intramural support. Both PumpPrimer mechanisms and Researcher Mobility Travel grants will require a brief final survey/final report to help us evaluate the effectiveness of this program. Questions to Cindy Gary, [cindy.gary@rochester.edu](mailto:cindy.gary@rochester.edu).

**The following programs accept applications on an ongoing basis:**

**PumpPrimer I:** Multi-institutional and/or multi-investigator research projects.

Increasingly, federal agencies are interested in research that brings together experts with complementary skills to address grand challenges. We encourage faculty to take on such large-scale initiatives because they benefit multiple AS&E faculty, increase the quality and stability of our research infrastructure, and increase our national and international visibility. The Dean's office may provide:

·Teaching relief for the faculty member who champions the project.

·Administrative support from our office for proposal preparation.

·Travel up to \$5K for planning proposals that bring together multi-institutional researchers.

*This weekly message from Cindy Gary, Assistant Dean for Grants and Contracts, highlights research funding opportunities and announcements that are particularly relevant to Hajim School faculty, staff and students. If you have any questions, please contact [cindy.gary@rochester.edu](mailto:cindy.gary@rochester.edu) or call 253-5173.)*

**Researcher Mobility Travel Grants:** International Research Collaboration

- Provide up to \$5K to conduct overseas research visits (one to three months).
- Support for faculty research and expanding international collaborative networks.

**Environmental Health Sciences Center @ URMC**

<https://www.urmc.rochester.edu/environmental-health-sciences.aspx?redir=www2.envmed.rochester.edu/envmed/EHSC>

**Internal Deadline:** July 15, 2016

**Funding:** \$30,000 max. Funds are restricted to research expenses and staff salaries, and cannot be used to support travel, faculty salary, or equipment purchases. Junior faculty may use a portion of these funds for salary support

**Synopsis:** The Environmental Health Sciences Center (EHSC) has funds to support a limited number of meritorious Pilot Projects. The objective of the pilot project should be relevant to the theme of the EHSC, namely "Environmental Agents as Modulators of Human Disease and Dysfunction". We are interested in receiving proposals addressing how the environment contributes to cumulative health risk by modifying stem cell function, host-pathogen interactions, early life origins of adult disease, or other mechanisms. Applicants may request a maximum of \$30,000 for the duration of one year and must hold a tenure-track position. Applications from new investigators collaborating with existing EHSC Faculty are encouraged.

**Questions?** Contact Michael O'Reilly ([Michael\\_OReilly@urmc.rochester.edu](mailto:Michael_OReilly@urmc.rochester.edu))

**Limited Submission**

**National Science Foundation**

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

<http://www.nsf.gov/pubs/2016/nsf16571/nsf16571.pdf>

**Internal Deadline: July 8, 2016. Only 1 selection per university.**

**NSF Preliminary due September 14, 2016**

**Funding Level:** Estimated Number of Awards: 8 to 12, pending the availability of funds, the average award size is expected to be approximately \$4 million over 5 years.

\*UR was awarded a PIRE in 2015. PI, Carmala Garziona, EES PIRE: DUST stimulated drawn-down of atmospheric CO<sub>2</sub> as a trigger for Northern Hemisphere Glaciation

[http://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1545859&HistoricalAwards=false](http://www.nsf.gov/awardsearch/showAward?AWD_ID=1545859&HistoricalAwards=false)

**Program Synopsis:** 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.

**Send Applications to:** Cindy Gary (Hajim) [cindy.gary@rochester.edu](mailto:cindy.gary@rochester.edu). **Limited submission instructions and forms can be found at** <http://www.rochester.edu/orpa/funding/limitedsub.html>

## **External**

### **Department of Defense (DOD)**

**FY 2017 National Security Science and Engineering Faculty Fellowship (NSSEFF) program renamed the Vannevar Bush Faculty Fellowship (VBFF)**

**N00014-16-R-FO12**

**The full solicitation can be found at:** <http://www.grants.gov> . Search for NSSEFF, N00014-16-R-FO12.

[http://www.acq.osd.mil/rd/basic\\_research/program\\_info/nsseff.html](http://www.acq.osd.mil/rd/basic_research/program_info/nsseff.html)

**Deadline: August 17, 2016 White Paper.** Applicants must register on the AcquTrak portal by August 15 to submit a white paper

**Funding:** maximum award of \$3 million total over five years. Previously, 15 awards were made in FY 2016 – four each in applied mathematics and materials, three in quantum, and one each in oceanography, manufacturing, neuroscience, and optics.

**Synopsis:** VBFF program seeks the best and brightest in academia to conduct research in a range of basic research areas of interest to DOD to familiarize outstanding university researchers and their students with DOD's current and future challenges; educate and train outstanding student and post-doctoral researchers for the defense and national security workforce; and ultimately foster long-term relationships between outstanding university researchers and the DOD. DOD is particularly interested in ambitious “blue sky” research that will lead to revolutionary discoveries, new fields of research, or disruption of existing theories. The program is overseen by the Basic Research Office within the Office of Assistant Secretary of Defense for Research and Engineering (ASD (R&E)), and is managed by the Office of Naval Research (ONR), who released the solicitation.

Proposals are invited in the following DOD basic research areas:

1. **Engineering Biology:** this is a priority for DOD because of potential applications to improve warfighter resilience, produce organic and inorganic materials in biological systems, and develop new sensing capabilities.
2. **Quantum Information Science:** DOD seeks new algorithms and the development of small- or medium-sized quantum systems to enhance cybersecurity, improve sensing and high-resolution imaging, and attain navigation and positioning without GPS.
3. **Cognitive Neuroscience:** DOD is interested in basic research that expands the understanding of the neural mechanisms of sleep, memory, neural plasticity, and motor activity and technologies that enhance a warfighter's performance when sleep-deprived and in intense emotional stress.
4. **Novel Engineered Materials:** focuses on research of the properties of engineered materials and discovery of new materials and the characteristics they exhibit when put in extreme environments, like high temperature and radioactivity.
5. **Applied Mathematics (theory and experiments) and Statistics:** DOD seeks novel methods and scientific concepts to overcome technical hurdles and drive new developments in areas such as compressive sensing, network analysis, and image processing.
6. **Manufacturing Science:** DOD is interested in innovations across manufacturing science that enable increased knowledge, understanding, and manipulative capability. In particular, research related to challenges associated with new material assemblies and structures is of interest. For example, research in processing and modeling to inform the development of automated prototyping or produce precision-engineered assemblies of functional organic and inorganic materials. Other areas of interest include scalable manufacturing techniques, disruptive and flexible processing, and techniques for manufacturing structures at the fundamental limits of scalability and efficiency.
7. **Other fields of research with high potential:** applicants can submit a research proposal that does not fit into one of the aforementioned categories; all proposals must support DOD research priorities and focus on basic, transformative science.

**Alfred P. Sloan Foundation - Sloan Research Fellowship (<http://www.sloan.org/sloan-research-fellowships/>)**

**Sloan Research Fellowships - Sloan Foundation**

[www.sloan.org](http://www.sloan.org)

**Deadline: July 15, 2016 – Nomination portal will open. September 15, 2016 All nomination materials due.**

**Funding** \$60,000 over 2 year period

**Program Synopsis:** Eligibility. Candidates must hold a tenure track (or equivalent) position at a college, university, or other degree-granting institution in the United States or Canada. Tenure track faculty positions at the candidate's institution must include a yearly teaching requirement. Candidates must hold a Ph.D. (or equivalent) in chemistry, computational or evolutionary molecular biology, computer science, economics, mathematics, neuroscience, ocean sciences, physics, or a related field; Candidates' most recent Ph.D. (or equivalent) must have been awarded on or after September 1, 2010. The Sloan Research Fellowships seek to stimulate fundamental research by early-career scientists and scholars of outstanding

promise. These two-year fellowships are awarded yearly to 126 researchers in recognition of distinguished performance and a unique potential to make substantial contributions to their field. The Alfred P. Sloan Foundation received more than 700 fellowship applications each year. Fellows are selected on the basis of their independent research accomplishments, creativity, and potential to become leaders in the scientific community through their contributions to their field.

**Interested applicants should contact Emily Kellas at Foundation Relations ([ekellas@ur.rochester.edu](mailto:ekellas@ur.rochester.edu)) for detailed assistance and analysis of the foundation's interests/ priorities as they relate to a competitive application.**

## **National Science Foundation**

### **Joint NSF/NIH Initiative on Quantitative Approaches to Biomedical Big Data (QuBBD) 16-573**

<http://www.nsf.gov/pubs/2016/nsf16573/nsf16573.htm>

**Deadline:** September 28, 2016

**Funding:** Awards sizes are expected to range from \$200,000 to \$300,000 (total costs) per year with durations of up to 3 years.

**Synopsis:** The Quantitative Approaches to Biomedical Big Data Program is designed to support research that addresses important application areas at the intersection of the biomedical and data sciences by encouraging inter- and multi-disciplinary collaborations that focus on innovative and transformative approaches to address these challenges. Award sizes are expected to range from \$200,000 to \$300,000 (total costs) per year with durations of up to 3 years. The Division of Mathematical Sciences in the Directorate of Mathematical and Physical Sciences at the National Science Foundation and the National Institutes of Health Big Data to Knowledge (BD2K) Initiative plan to support research that addresses critical application areas at the intersection of the biomedical and data sciences. Appropriate application areas are those supported by the NIH Big Data to Knowledge initiative (see <https://datascience.nih.gov/bd2k>), including, but not limited to biomedical, behavioral, clinical, and translational sciences. Proposals that are not appropriate for funding by NIH BD2K or NSF DMS will be returned without review. Investigators are strongly encouraged to discuss proposal aims with the NIH or NSF program officers listed as points of contact on the program webpage

## **DARPA - Information Innovation Office**

### **Dispersed Computing**

#### **DARPA-BAA-16-41**

#### **DARPA-BAA-16-41-Full Announcement - DARPA-BAA-16-41.zip**

**Deadline:** September 7, 2016

**Funding:** Multiple awards are anticipated. The level of funding for individual awards made under this solicitation has not been predetermined and will depend on the quality of the proposals received and the availability of funds.

**Synopsis:** 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 is a four-year program with two 24-month phases. The program comprises the three technical areas (TAs) as follows, TA1 - Algorithms for Dispersed Mission-Aware Computation; TA2 - Programmable Nodes and Protocol Stacks, TA3 - Technology Integration

## **DARPA Microsystems Technology Office (MTO) Office-Wide Broad Agency Announcement (BAA)**

**DARPA-BAA-14-42**

<http://www.darpa.mil/work-with-us/opportunities?PP=1>

**Deadline:** **September 9, 2016**

**Funding:** ~\$500,000 - \$1M

**Synopsis:** Amendment - 1) add stream-lined proposal preparation instructions specifically for proposals for studies that are 12 months or less in duration, cost \$500,000 or less, and in which an assistance instrument (grant or cooperative agreement) is being sought. MTO's revolutionary work applying advanced capabilities in areas such as wide-band gap materials, phased array radars, high-energy lasers and infrared imaging have helped the United States establish and maintain technological superiority for more than two decades. As MTO evolves to address future challenges in microsystems, the office has identified four target problem areas: (1) our critical reliance on the electromagnetic spectrum, (2) the decentralization of effects within the battlefield, (3) the impending end of Moore's law, and (4) embracing and thriving in the internationalized technology base. Contacting MTO program managers to discuss research interests is encouraged. Collaborative efforts/teaming are encouraged.

## **National Science Foundation**

### **Directorate for Mathematics and Physical Sciences**

**Deadlines: September 30, 2016**

#### **Division of Chemistry**

-Chemical Catalysis PD-09-6884 [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503418](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503418)

- Submissions that address national needs for sustainability are particularly encouraged.

-Chemical Structure, Dynamics and Mechanisms A - CSDM A PD 12-9101  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504796](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504796)

-Chemical Structure, Dynamics and Mechanisms B - CSDM B PD 12-9102  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504807&org=CHE&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504807&org=CHE&from=home)

-Chemical Theory, Models and Computational Methods – CTMC PD 09-6881  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503420](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503420)

-Chemical Synthesis – SYN PD 09-6878 [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503419](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503419)

**Deadlines: October 31, 2016**

-Chemical Measurement and Imaging – CMI PD 09-6880  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503413&org=CHE&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503413&org=CHE&from=home)

-Chemistry of Life Processes – CLP PD 09-6883  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503417&org=CHE&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503417&org=CHE&from=home)

-Environmental Chemical Sciences – ECS PD 09-6882  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503416&org=CHE&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503416&org=CHE&from=home)

-Macromolecular, Supramolecular and Nanochemistry – MSN PD 09-6885  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503422&org=CHE&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503422&org=CHE&from=home)

**National Science Foundation**

**Dear Colleague Letter: Grant Opportunities for Academic Liaison with Industry (GOALI) 16-099**

[http://www.nsf.gov/pubs/2016/nsf16099/nsf16099.jsp?WT.mc\\_id=USNSF\\_25&WT.mc\\_ev=click](http://www.nsf.gov/pubs/2016/nsf16099/nsf16099.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click)

**Deadlines: Ties to unsolicited deadlines. Supplements – check with program manager of existing NSF award.**

**Funding:** \*Program 1: Industry - University Collaborative Projects (Full proposals or requests for supplemental funding) – typically <\$100,000 per year and pays for university research/educational activities. The university grant may support activities of faculty and his/her

students and research associates in the industrial setting. NSF funds cannot be used by the industrial research partner.

\*\* Program 2: Faculty and Students in Industry (requests for supplemental funding to existing NSF awards). Faculty-in-Industry awards will typically range from \$30,000 to \$75,000 for up to one year; Postdoctoral Industrial Fellowship \$75,000 (inclusive) for a 12-month period.

\*\*\* Program 3: Industry Engineers and Scientists in Academe (requests for supplemental funding to existing NSF awards). Supplement awards are for a maximum of \$75,000 for up to one year.

**Synopsis: An academic scientist or engineer interested in submitting a GOALI-designated proposal to a standing NSF funding opportunity or a GOALI supplemental proposal to an existing NSF-funded award must contact the cognizant NSF program director prior to submission.** Special interest is focused on affording opportunities for:

- Interdisciplinary university-industry teams to conduct collaborative research projects, in which the industry research participant provides critical research expertise, without which the likelihood for success of the project would be diminished;

- Faculty, postdoctoral fellows, and students to conduct research and gain experience in an industrial setting; and

- Industrial scientists and engineers to bring industry's perspective and integrative skills to academe.

GOALI-designated proposals and supplements should focus on research that addresses shared interests by academic researchers and industrial partners. The research should further scientific and engineering foundations to enable future breakthrough technologies with the potential to address critical industry needs. Industry involvement assures that the research is industrially relevant. Principal Investigators are expected to integrate their research objectives with educational and industrial needs.

\*Academic and industry partners should agree in advance as to how intellectual property (IP) rights will be handled. A signed university-industry agreement on IP (including publication and patent rights) must be submitted before an award is issued. NSF will examine this document to ensure that the graduation of students will not be unduly affected. NSF is responsible neither for the agreement reached nor the IP information exchanged between the academic institution and the industry partner.

## **National Science Foundation**

### **Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR) 15-585**

<http://www.nsf.gov/pubs/2015/nsf15585/nsf15585.pdf>

#### **Deadlines:**

**November 2, 2016** - Exploration and Design Tier for Engaged Student Learning & Institution and Community Transformation

**January 11, 2017** - Development and Implementation Tiers for Engaged Student Learning & Institution and Community Transformation

#### **Funding:**

**Engaged Student Learning:** Exploration and Design: Up to \$300K, for 3 years; Level 1. Development and Implementation: up to \$600K, for 3 years; Level 2. \$601K - \$2M, for 5 years

**Institutional and Community Transformation:** Exploration and Design: Up to \$300K, for 3 years; Development and Implementation Up to \$3M, for 5 years

Institutional and Community Transformation track, Exploration and Design up to \$300,000 over a period of up to 3 years

**Synopsis:** the program features two tracks: (1) Engaged Student Learning and (2) Institutional and Community Transformation. Two tiers of projects exist within each track: (i) Exploration and Design and (ii) Development and Implementation. IUSE: EHR program invites proposals that address immediate challenges and opportunities that are facing undergraduate STEM education, as well as those that anticipate new structures (e.g. organizational changes, new methods for certification or credentialing, course re-conception, cyberlearning, etc.) and new functions of the undergraduate learning and teaching enterprise. The IUSE: HER program recognizes and respects the variety of discipline-specific challenges and

opportunities facing STEM faculty as they strive to incorporate results from educational research into classroom practice and work with

education research colleagues and social science learning scholars to advance our understanding of effective teaching and learning.

## **Venture Well**

<https://venturewell.org/facultygrants/>

**Deadline: November 9, 2016**

**There are two types of faculty grants: Course & Program grants and Sustainable Vision grants. Grants are awarded up to \$30,000.**

1. Course & Program grants support courses or programs at the intersection of invention, innovation, and entrepreneurship that lead to the creation and support of E-Teams. Focus areas include but are not limited to: General (technology-based) entrepreneurship; New materials/clean tech/green energy; Biomedical and healthcare

Information technology

2. Sustainable Vision (SV) grants are very similar to Course & Program grants in that they support experiential learning and generate E-Teams. The key difference is that Sustainable Vision proposals must lead to the development of technology innovations that address poverty alleviation and basic human needs. A local, off-campus partner must be identified in the proposal. Focus areas include but are not limited to: Water; Sanitation; Healthcare; Agriculture; Shelter; Information technology