

FUNDING OPPs & INFO

For Hajim School Researchers



Oct. 26, 2015

FUNDING OPPORTUNITIES

NSF I-Corps Site Program – AIN Center for Entrepreneurship

<http://www.rochester.edu/entrepreneurship/icorps/>

Deadline: November 16, 2015

Funding: \$3,000

Synopsis: Hajim School students, staff and faculty interested in entrepreneurship training and in identifying and developing valuable product opportunities from their academic research, can apply to the University of Rochester's I-Corps Site program.

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 or call 253-5173.)

Internal Limited Submission

NSF Major Research Instrumentation (MRI) 15-504

Link to program solicitation/guidelines:

<http://www.nsf.gov/pubs/2015/nsf15504/nsf15504.pdf>

Internal Deadline: October 30, 2015.

Instructions for submitting internal application: Internal applications must consist of (1) chair's letter, (2) research abstract, (3) biosketch or CV, (4) budget and be submitted on required forms.

Funding: \$100,000 - \$4M

Program Synopsis: MRI serves to increase access to shared scientific and engineering instruments for research and research training in our Nation's institutions of higher education, not-for-profit museums, science centers and scientific/engineering research organizations. The program provides organizations with opportunities to acquire major instrumentation that supports the research and research training goals of the organization and that may be used by other researchers regionally or nationally.

Contact Cindy if you have any questions. Internal decisions for one of the 2 acquisition, or 1 development slot will be made by December 1, 2016. UR Selected full proposals are due to NSF January 13, 2016.

NSF Directorate for Mathematics and Physical Sciences 2015 Programs – great overview of MPS

http://www.nsf.gov/pubs/2015/nsf15038/nsf15038.pdf?WT.mc_id=USNSF_25&WT.mc_ev=click

**Improved Networking Through Embedded Processing and Sensing
BAA-AFRL-RIK-2015-0007**

Agency: Department of the Air Force

Office: Air Force Material Command

Location: AFRL/RIK – Rome

<https://www.fbo.gov/index?s=opportunity&mode=form&id=1f8bd81307f8d4984a3f266cbb34a9f3&tab=core&cvview=1>

Deadlines: FY16 by 30 October 2015 2 pm EST; FY17 by 1 November 2016

Funding: Individual awards will not normally exceed 36 months with dollar amounts normally ranging between \$1M to \$3M per year. There is also the potential to make awards up to any dollar value.

Synopsis: AFRL/RI is soliciting white papers under this BAA for research, design, development, test, evaluation and experimentation of innovative technologies and techniques for Improved Networking through Embedded Processing and Sensing. The objective of the BAA is to develop, demonstrate, and evaluate new sources and methods for improving network connectivity and stability through embedded processing and sensing. This effort is expected to provide research and development activities to enhance warfighter mission capabilities and advance baseline performance beyond what is currently considered satisfactory. Under the proposed effort, it is anticipated that improved network connectivity research and development will be conducted in support of Command & Control (C2) operations. Work is encouraged in, but not limited to, these focus areas:

1. Network Sensing Technologies
2. Network Embedded Processing
3. Distributed Control

National Science Foundation

Directorate of Engineering

Division of Civil, Mechanical and Manufacturing Innovation (CMMI)

Deadline: February 16, 2016

Synopsis: four program clusters, each containing four to five research programs:

- [Advanced Manufacturing](#)
- [Mechanics and Engineering Materials](#)
- [Resilient and Sustainable Infrastructures](#)
- [Operations, Design and Dynamical Systems](#)

National Science Foundation

Emerging Frontiers in Research and Innovation (EFRI) program 16-502

<http://www.nsf.gov/pubs/2016/nsf16502/nsf16502.pdf>

* Emerging Frontiers and Multidisciplinary Activities (EFMA) Office will hold an information workshop on October 23,

2015 : http://www.nsf.gov/events/event_summ.jsp?cntn_id=136295

Deadline: LOI Required - November 09, 2015; Preliminary - January 14, 2016;

Selected Full - April 08, 2016

Funding: ~\$2M per award (13 4-year award with anticipated funding of \$26M)

Synopsis: EFRI seeks proposals with transformative ideas that represent an opportunity for a significant shift in fundamental engineering knowledge with a strong potential for long term impact on national needs or a grand challenge. All EFRI projects to include a "Broadening Participation Plan" For this solicitation, we will consider proposals that aim to investigate emerging frontiers in the following two research areas:

Advancing Communication Quantum Information Research in Engineering

(ACQUIRE) Thrust. This emerging engineering area and the ensuing interdisciplinary activities will leverage established Quantum Information Science (QIS) and will impact fields such as materials science, mathematics, physics and engineering in the next decade. The lessons learned from QIS research will accelerate engineering of systems on a chip, and help define goals for successfully addressing the scientific and engineering challenges of ACQUIRE , as further outlined in Thrust Areas 1-3. Each of the proposals in response to this EFRI solicitation must address at least two of the three thrusts outlined below:

1. Develop reproducible room temperature single photon sources and detectors on a chip
2. Develop low-energy quantum devices such as repeaters, memories, and other photonics
3. Develop scalable quantum entangled Qbits, robust and secure communication links, and demonstrate a fiber-based quantum circuit network, with noise correction algorithms

New Light and Acoustic Wave Propagation: Breaking Reciprocity and Time-Reversal Symmetry (NewLAW).

This emerging technical area and the ensuing interdisciplinary activities should be coordinated by engineering-led teams that include contributions from researchers in material, mathematical and physical sciences. Highly innovative proposals are sought that build upon established and emerging research in non-reciprocity and topologically protected wave propagation, and that impact fields such as acoustics, mechanics, electromagnetics, opto-mechanics, material science, and dynamics and control. The exploration of concepts over a broad range of scales is expected to lead to new findings that support the design of "topologically nontrivial" photonic, electronic and acoustic systems. Projects should include relevant activities in the following three thrust areas, with clear innovation in at least one:

- 1) modeling,
- 2) analysis, design and control, and
- 3) fabrication, testing and characterization.

Highly interdisciplinary projects are sought that pursue breakthroughs in the following three thrusts:

1. Modeling
2. Analysis, design and control
3. Fabrication, testing and characterization

National Science Foundation

Directorate for Social, Behavioral & Economic Sciences

Dynamics of Coupled Natural and Human Systems (CNH) 14-601

<http://www.nsf.gov/pubs/2014/nsf14601/nsf14601.pdf>

Deadline: November 17, 2015

Funding: CNH Large Research Projects. Awards in this category provide two to five years of support for projects ranging in size from \$500,000 to \$1,800,000. CNH Small Research Projects. Awards in this category provide two to five years of support for projects ranging in size from \$150,000 to \$500,000.

Synopsis: Dynamics of Coupled Natural and Human Systems (CNH) Program supports interdisciplinary research that examines human and natural system processes and the complex interactions among human and natural systems at diverse scales. Research projects to be supported by CNH must include analyses of four different components:

- (1) the dynamics of a natural system;
- (2) the dynamics of a human system;
- (3) the processes through which the natural system affects the human system; and
- (4) the processes through which the human system affects the natural system.

CNH also supports research coordination networks (CNH-RCNs) designed to facilitate activities that promote future research by broad research communities that will include all four components necessary for CNH funding. Large and small research projects are expected to differ in scope.

National Science Foundation

Computing and Communication Foundations (CCF): Core Programs 15-573

<http://www.nsf.gov/pubs/2015/nsf15573/nsf15573.pdf>

Deadlines: Medium Projects - September 16, 2015; Large Projects - September 24, 2015; **Small Projects - November 18, 2015**

Funding: 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.

Synopsis: 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.

National Science Foundation

Computer and Network Systems (CNS): Core Programs 15-572

<http://www.nsf.gov/pubs/2015/nsf15572/nsf15572.pdf>

Deadlines: Medium Projects - September 16, 2015; Large Projects - September 24, 2015; **Small Projects - November 18, 2015**

Funding: 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.

Synopsis: new knowledge in two core programs: Computer Systems Research (CSR) program; and Networking Technology and Systems (NeTS) program.

National Science Foundation

Advanced Cyberinfrastructure (ACI)

Secure and Trustworthy Cyberspace (SaTC) 15-575

<http://www.nsf.gov/pubs/2015/nsf15575/nsf15575.pdf>

Deadlines: Medium Projects - September 16, 2015; Large Projects - September 24, 2015; **Small Projects - November 18, 2015; Cybersecurity Education Projects - December 16, 2015**

Funding: 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. SaTC program seeks proposals focusing entirely on Cybersecurity Education with total budgets limited to \$300,000 and durations of up to two years.

Synopsis: Program welcomes proposals that address cybersecurity from: a Trustworthy Computing Systems (TWC) perspective and/or a Social, Behavioral and Economic Sciences (SBE) perspective; the Secure, Trustworthy, Assured and Resilient Semiconductors and Systems (STARSS) perspective; or the Transition to Practice (TTP) perspective.

National Science Foundation

Integrative Strategies for Understanding Neural and Cognitive Systems (NSF-NCS) 16-508

<http://www.nsf.gov/pubs/2016/nsf16508/nsf16508.htm>

Deadline: Letter of Intent (required) December 10, 2015 INTEGRATIVE FOUNDATIONS; Full January 26, 2016 INTEGRATIVE FOUNDATIONS

Funding: INTEGRATIVE FOUNDATIONS awards are anticipated to range from a total of \$500,000 to \$1,000,000 (including direct and indirect costs), with durations of 2 to 4 years. A request for a CORE+ SUPPLEMENT may be submitted in either of two ways: (1) Proposers may include a CORE+ SUPPLEMENT activity as a component of a new (or renewal) proposal submitted to the CISE, EHR, or ENG directorate, requesting additional funds of up to \$200,000; or (2) Investigators holding an existing award managed by CISE, EHR, or ENG may submit a post-award request for supplemental funding of up to 20% of the existing award, not to exceed \$200,000

Synopsis: Two of the themes are continued from FY15: Neuroengineering and Brain-Inspired Concepts and Designs, and Individuality and Variation. Two additional integrative research themes are introduced: Cognitive and Neural Processes in Realistic, Complex Environments; and Data-Intensive Neuroscience and Cognitive Science. The complexities of brain and behavior pose fundamental questions in many areas of science and engineering, drawing intense interest across a broad spectrum of disciplinary perspectives while eluding explanation by any one of them. Rapid advances within and across disciplines are leading to an increasingly interconnected fabric of theories, models, empirical methods and findings, and educational approaches, opening new opportunities to understand complex aspects of neural and cognitive systems through integrative multidisciplinary approaches. This program calls for innovative, integrative, boundary-crossing proposals that can best capture those opportunities. NSF seeks proposals that are bold, risky, and transcend the perspectives and approaches typical of single-discipline research efforts. This cross-directorate 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/>). 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. The program will consider two classes of proposals, for pursuit of integrative opportunities at two different levels of collaboration and coordination.

National Science Foundation

EARly-concept Grants for Exploratory Research (EAGER)

No specific program announcement

Deadline: Open

Funding: Requests may be for up to \$300K and of up to two years duration

Synopsis: EAGER funding mechanism may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. This work may be considered especially "high risk-high payoff" in the sense that it, for example, involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives. These exploratory proposals also may be submitted directly to an NSF program, but the

EAGER mechanism should not be used for projects that are appropriate for submission as “regular” (i.e., non-EAGER) NSF proposals. PI(s) must contact the NSF program officer(s) whose expertise is most germane to the proposal topic prior to submission of an EAGER proposal. This will aid in determining the appropriateness of the work for consideration under the EAGER mechanism; this suitability must be assessed early in the process.

**National Science Foundation
Grants for Rapid Response Research (RAPID)**

No specific program announcement

Deadline: Open

Funding: Requests may be for up to \$200K and of one year duration

Synopsis: RAPID funding mechanism is used for proposals having a severe urgency with regard to availability of, or access to, data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events. PI(s) must contact the NSF program officer(s) whose expertise is most germane to the proposal topic before submitting a RAPID proposal. This will facilitate determining whether the proposed work is appropriate for RAPID funding.