

Office of Research Newsletter – October 24, 2014

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Part I. News and Announcements

National Robotics Initiative (NRI) and NIH Proposal Review Process

The National Robotics Initiative is a multi-agency funding opportunity with the goal to accelerate the development and use of robots in the United States that work beside, or cooperatively with, people (<http://www.nsf.gov/pubs/2015/nsf15505/nsf15505.htm>). Innovative robotics research and applications emphasizing the realization of such co-robots working in symbiotic relationships with human partners is supported by multiple agencies of the federal government including the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), the National Institutes of Health (NIH), the U.S. Department of Agriculture (USDA), and the U.S. Department of Defense (DOD). The purpose of this program is to develop the next generation of robotics, to advance the capability and usability of such systems and artifacts, and to encourage existing and new communities to focus on innovative application areas. It will address the entire life cycle from fundamental research and development to manufacturing and deployment. Collaboration between academic, industry, non-profit and other organizations is strongly encouraged to establish better linkages between fundamental science and technology development, deployment and use.

NIH encourages robotics research and technology development to enhance health, lengthen life and reduce illness and disability. NIH also supports non-hypothesis driven applications, which includes technology-driven and problem-driven applications. Specifically, NIH is interested in supporting the development of assistive robotic technology to achieve functional independence in humans; improve quality of life; assist with behavioral therapy and personalized care; and promote wellness/health. The most significant challenges will be in addressing safety issues, especially for applications to be used in home-based and long-term care settings where integration of complex systems will be required. Additionally, these assistive robots need to quickly adapt to changes of the user and the environment. Human assistive devices should be designed to assist healthcare providers and as well as the individuals needing care. Development

of robotic applications is important to NIH because of their potential significant impact on healthcare in the future. Human assistive devices will revolutionize healthcare in the next 20 years as much as personal electronics have changed our daily lives in the past two decades. Affordable and accessible robotic technology can facilitate wellness and personalized healthcare. Continual health assessment and personalized intervention have the potential to offset the shrinking size of the healthcare workforce and the growing elderly and disabled population. In the future, assistive robotics will enable people to engage in all aspects of human life with endurance and dignity.

Applications must be submitted to the NSF, not to the NIH. For those applications that are identified for potential funding by participating NIH ICs, the applicant organization will be required to submit an R01 application in an NIH-approved format. PD/PIs invited to submit to NIH will receive further information on submission procedures from the NIH. The NIH application will not be allowed to increase the proposed budget or change the scientific content of the application in the converted submission to the NIH. The summary statement will be presented to the involved IC's National Advisory Council for the second level of review. Subsequent to the Council review, NIH ICs will make their funding determinations and selected awards will be made.

Please note that applications will be submitted for review to the NSF on January 14, 2015. PDs/PIs of applications selected for potential funding by the participating NIH ICs will be notified by the end of March 2015. The converted submission to NIH will be due on April 7, 2015, which will be an extremely short conversion time. The applicant organization will want to work closely with their Sponsored Programs Office to assure a timely submission during this narrow submission window. The earliest project start date will be July 1, 2015.

2015/2016 Major Research Instrumentation Program (MRI): Instrument Acquisition or Development

NSF recently posted the 2015/2016 Major Research Instrumentation Program (MRI): Instrument Acquisition or Development

(http://www.nsf.gov/pubs/2015/nsf15504/nsf15504.htm?WT.mc_id=USNSF_25&WT.mc_ev=click) to which Rensselaer can submit or be included as a significantly funded sub-awardee in no more than three proposals (please check the Eligibility Information of the solicitation for the definition of significantly funded sub-awardees). No more than two proposals may be for instrument acquisition. The Office of Research will not support MRI proposals for purchasing equipment currently available at campus core facilities.

The Office of Research is soliciting internal declarations of interest for this program.

Declarations of interest should not exceed two pages, and should:

- List the PI and co-PIs (if Rensselaer is a sub-awardee in the proposal, please state the Rensselaer percentage of the total budget request to NSF)
- Explicitly specify the proposal as either Instrument Acquisition (Track 1) or Instrument Development (Track 2)
- Describe the focus of the proposal (executive summary style including one paragraph each for Intellectual Merit and Broader Impacts). In addition, please describe whether the instrument will overlap with the existing Rensselaer core facility capabilities or not.

If you are interested in submitting to this solicitation, please send your declaration of interest to Jack Huang (huangj7@rpi.edu) in the Office of Research no later than November 24, 2014. The Office of Research will review the declarations of interest and contact the PIs within a week.

A Weekly Newsletter from DOE Office of Energy Efficiency and Renewable Energy (EERE): <http://apps1.eere.energy.gov/news/enn.cfm>

MARK YOUR CALENDAR

November 5, 2014, 8:30 a.m.-5:30 p.m., Center for Biotechnology and Interdisciplinary Studies Auditorium
Medical Device Day—Models, Big Data and Healthcare

More at www.rpi.edu/news/events/mdd/

Part II. Funding Opportunities

AFRL

Continuous Collection, Processing, and Analysis of Bio-Markers for Human Performance Monitoring

https://www.fbo.gov/index?s=opportunity&mode=form&id=d492cb7046cba950433ac6ab02409832&tab=core&_cview=0

December 5, 2014

Navy

Science, Technology, Engineering & Mathematics Education, Outreach, and Workforce Program

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268949>

September 30, 2015

DOE

Landscape Design for Sustainable Bioenergy Systems

<https://eere-exchange.energy.gov/#FoaIdfe2ab85d-f92e-4f03-a386-efe605acafe3>

Concept Paper Due Date: November 21, 2014. Full Application Due Date: January 12, 2015

Wind Energy - Bat Impact Minimization Technologies and Field Testing Opportunities

<https://eere-exchange.energy.gov/#FoaIdda8c3624-3598-4dd8-90c3-ae66f45de796>

Concept Paper Due Date: November 21, 2014. Full Application Due Date: January 7, 2015

Generators for Small Electrical and Thermal Systems (GENSETS)

<https://arpa-e-foa.energy.gov/#FoaIda31af03c-1574-45b2-aca4-923e9bd48c29>

Concept Paper Due Date: December 1, 2014. Full Application Due Date TBD

**Request for Information (RFI): Electrolytic Hydrogen Production Workshop Report:
Public Comment**

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269077>

December 5, 2014

NIH

NIH Director's Early Independence Awards (DP5)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-14-004.html>

LOI Due Date: December 30, 2014. Application Due Date: January 30, 2015

**Systems Developmental Biology for Understanding Embryonic Development and the
Ontogeny of Structural Birth Defects (R01)**

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-020.html>

January 15, 2015; November 10, 2015; November 10, 2016

Brain Somatic Mosaicism and Its Role in Psychiatric Disorders (Collaborative U01)

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-022.html>

February 24, 2015; October 23, 2015; June 24, 2016; February 24, 2017

**Physical Sciences-Oncology Network (PS-ON): Physical Sciences-Oncology Projects (PS-
OP) (U01)**

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-021.html>

February 26, 2015; November 25, 2015; May 26, 2016; September 21, 2016; May 26, 2017;
September 21, 2017

Elucidating HIV and HIV-treatment Associated Metabolic/Endocrine Dysfunction (R01)

<http://grants.nih.gov/grants/guide/rfa-files/RFA-DK-14-023.html>

LOI Due Date: March 9, 2015. Application Due Date: April 9, 2015,

NSF

Limited Solicitation: Scalable Nanomanufacturing (SNM)

[http://www.nsf.gov/pubs/2015/nsf15507/nsf15507.htm?WT.mc_id=USNSF_25&WT.mc_ev=cli
ck](http://www.nsf.gov/pubs/2015/nsf15507/nsf15507.htm?WT.mc_id=USNSF_25&WT.mc_ev=click)

January 20, 2015

US Ignite

[http://www.nsf.gov/pubs/2015/nsf15508/nsf15508.htm?WT.mc_id=USNSF_25&WT.mc_ev=cli
ck](http://www.nsf.gov/pubs/2015/nsf15508/nsf15508.htm?WT.mc_id=USNSF_25&WT.mc_ev=click)

January 21, 2015

Systems Science

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268950>

February 1, 2015 - February 17, 2015; February 1 - February 15, Annually Thereafter;
September 1, 2015 - September 15, 2015; September 1 - September 15, Annually Thereafter

Engineering and Systems Design

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268952>

February 1, 2015 - February 17, 2015; February 1 - February 15, Annually Thereafter;
September 1, 2015 - September 15, 2015; September 1 - September 15, Annually Thereafter

Science, Technology, and Society

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=268919>

February 2, 2015; February 2, Annually Thereafter; August 3, 2015; August 3, Annually
Thereafter

EPA

Water Quality Benefits

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269072>

January 14, 2015

Early Career Awards: Water Quality Benefits Grant

<http://www.grants.gov/web/grants/view-opportunity.html?oppId=269075>

January 14, 2015

Please note that this bulletin is not intended to be an exhaustive listing of funding opportunities. Your input and feedback are always welcome. Please send your comments and requests to be removed from the distribution list to huangj7@rpi.edu.