

## **Grant Opportunity Alerts: Issue: ORD-GOA-2014-05**

Here is a brief list of recent grant opportunities that may of interest to NJIT faculty.

### **Keywords and Areas Included:**

NSF: Internal Grant Competition for MRI; Environmental Biology, Mathematical Sciences, Robotics; Medical Robotics, Innovative Technology Experience for Students and Teachers

EPA: Healthy Watersheds

National Endowment for Humanities: Collaborative Research, Scholarly Activities

NIH: Biobehavioral and Technological Interventions: R15, R01 and R21

Core Center Grants on Neuroscience: P30

Spatial Uncertainty: Data, Modeling, R21, R01, R03

### **National Science Foundation**

#### **Internal Competition Through College/School Deans:**

#### **Grant Opportunity Watch: NSF Major Research Instrumentation Program: (MRI)**

**Brief Description:** The Major Research Instrumentation Program (MRI) serves to increase access to shared scientific and engineering instruments for research and research training in our Nation's institutions of higher education, and not-for-profit museums, science centers and scientific/engineering research organizations. This program especially seeks to improve the quality and expand the scope of research and research training in science and engineering, by supporting proposals for shared instrumentation that fosters the integration of research and education in research-intensive learning environments. Each MRI proposal may request support for the acquisition (Track 1) or development (Track 2) of a single research instrument for shared inter- and/or intra-organizational use; development efforts that leverage the strengths of private sector partners to build instrument development capacity at MRI submission-eligible organizations are encouraged.

#### **Limited Number of Submission:**

Three (3) as described below.

If three proposals are submitted, at least one of the proposals must be for instrument development (i.e., no more than two proposals may be for instrument acquisition).

**Awards Range:** \$100,000-\$4 million

**Expected Submission Deadline: January 22, 2015**

**Internal Competition:** Please submit up to 5 pages pre-proposal white paper to your respective Dean by November 1, 2014 in the following format. College level reviews will be conducted by Deans to forward recommendations for up to 2 re-proposals to the Office of Research and Development. The final selection will be made in consultation with deans (and a review committee depending on the number of pre-proposals received) by November 7. The following format for the pre-

proposal is suggested which is consistent with actual proposal guidelines and review criterion:

1. Cover Sheet (not counted in the page limit):
  - a. Title of the project proposal
  - b. Track Type: I or II
  - c. PI name and affiliation and contact information
  - d. Co-PIs name and affiliation
  - e. Additional users or any consortium information, if applicable
  - f. Date submitted to College Dean
2. Project Summary  
Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.
3. Proposal Description covering the subsections (a)-(e) as posted on the previous RFP on <http://www.nsf.gov/pubs/2013/nsf13517/nsf13517.htm> with the section:
  - a. Information About the Proposal/Instrument
  - b. Research Activities to be Enabled
  - c. Description of the Research Instrumentation and Needs
  - d. Impact on Research and Training Infrastructure
  - e. Management Plan

For Instrument Development Proposals (Track-II)

The section (a) to (e) should be organized to address the following (as described in the RFP):

- (a) Describe the design, construction and commissioning phases of the project, including the work breakdown structure of the project activities (i.e., activities broken into tasks). Include a description of parts and materials, the estimated deliverables, associated timelines and the anticipated cost of each activity.
- (b) Describe the technical expertise that is needed, and that will be available, to execute each activity. Describe the organization of the project staff and methods of assessing performance. For each member of the team, include a description of the responsibilities and explain why a given position is necessary for the completion of the design and construction of the new instrument.
- (c) Assess the risks associated with each activity and describe potential methods for mitigating the risks, and for re-analyzing and modifying the project plan to keep it within scope, schedule and budget.
- (d) Include plans for making the instrument design readily available to other researchers, for example by means of publications, by transferring the technology to other U.S. academic, industrial, or government laboratories, and/or by commercializing the instrument.
- (e) Include plans for the long-term operations and maintenance of the instrument, including procedures for allocating time on the instrument if appropriate. Describe plans for attracting and

supporting new users and information on anticipated usage and downtime if appropriate. Inclusion of a letter documenting the performing organization's commitment to operations and maintenance is required as a supplemental document.

4. Preliminary Budget and Budget Justification; and Required Cost-Sharing
5. Brief biographical sketch of PI with a brief description of current and previous accomplishments.

For pre-proposal review, the NSF MRI proposal review criterion may be used to help faculty receive some feedback on their proposals that may be helpful for their final or future proposal submissions. The merit review criterion as posted on the RFP is:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

- ***Instrument Acquisition Proposals.***

The extent of shared use of the instrumentation for research and/or research training. Whether the management plan includes sufficient infrastructure and technical expertise to allow effective usage of the instrument; and provides the organization's commitments for operations and maintenance.

Whether the request for operations and maintenance is justified and reasonable in magnitude. If direct support for student involvement in operations and maintenance is requested, reviewers will be asked to evaluate the involvement in terms of both instrument needs and training the next generation of instrumentalists.

Plans for using the new or enhanced research capability in research and research training.

For instrument acquisition proposals of \$1 million or above, proposals should address the potential impact of the instrument on the research community of interest and at the regional or national level when appropriate.

- ***Instrument Development Proposals:***

The appropriateness of submission as a development (Track 2) proposal.

The adequacy of the management plan. Does the plan have a realistic, detailed schedule? Are mechanisms in place to deal with potential risks?

The availability of appropriate technical expertise to design and construct the instrument.

If direct support for student involvement in development efforts is requested, reviewers will be asked to evaluate the involvement in terms of both project needs and training the next generation of instrumentalists.

The appropriateness of the cost of the new technology.

The need for development of a new instrument. Will the proposed instrument enable enhanced performance over existing instruments, or new types of measurement or information gathering? Is there a strong need for the new instrument in the larger user community?

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**Grant Program: National Robotics Initiative (NRI)**

**The realization of co-robots acting in direct support of individuals and groups**

**Agency:** NSF: 14-500

Directorate for Computer & Information Science & Engineering

Directorate for Engineering

Directorate for Biological Sciences; Division of Environmental Biology

National Aeronautics and Space Administration

National Institute of Biomedical Imaging and Bioengineering

National Institute of Neurological Disorders and Stroke

**RFP Website:** <http://www.nsf.gov/pubs/2014/nsf14500/nsf14500.pdf>

**Brief Description:** The goal of the National Robotics Initiative is to accelerate the development and use of robots in the United States that work beside, or cooperatively with, people. Innovative robotics research and applications emphasizing the realization of such co-robots acting in direct support of and in a symbiotic relationship 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), and the U.S. Department of Agriculture (USDA). The purpose of this program is the development of this 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. Methods for the establishment and infusion of robotics in educational curricula and research to gain a better understanding of the long term social, behavioral and economic implications of co-robots across all areas of human activity are important parts of this initiative. 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.

**Awards:** Standard Grants or Cooperative Agreement

**Letter of Intent:** Not required

**Cost Sharing Requirements:** Inclusion of voluntary committed cost sharing is prohibited.

**Proposal Deadline:** November 13, 2014

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**Grant Program: Innovative Technology Experiences for Students and Teachers (ITEST)**

**Agency:** NSF 14-512

Directorate for Education & Human Resources

**RFP Website:**

[http://www.nsf.gov/pubs/2014/nsf14512/nsf14512.htm?WT.mc\\_id=USNSF\\_25&WT.mc\\_ev=click](http://www.nsf.gov/pubs/2014/nsf14512/nsf14512.htm?WT.mc_id=USNSF_25&WT.mc_ev=click)

**Brief Description:** The ITEST program through research and model-building activities seeks to build understandings of best practice factors, contexts and processes contributing to K-12 students' motivation and participation in the science, technology, engineering, and mathematics (STEM) core domains along with other STEM cognate domains (e.g., information and communications technology (ICT), computing, computer sciences, data analytics, among others) that inform education programs and workforce domains. The ITEST program funds foundational and applied research projects addressing the development, implementation, and dissemination of innovative strategies, tools, and models for engaging students to be aware of STEM and cognate careers, and to pursue formal school-based and informal out-of-school educational experiences to prepare for such careers. ITEST supports projects that: (1) increase students' awareness of STEM and cognate careers; (2) motivate students to pursue the appropriate education pathways for STEM and cognate careers; and/or (3) provide students with technology-rich experiences that develop disciplinary-based knowledge and practices, and non-cognitive skills (e.g., critical thinking and communication skills) needed for entering STEM workforce sectors. ITEST projects may adopt an interdisciplinary focus on one or more STEM domains or focus on sub discipline(s) within a domain. ITEST projects must involve students, and may also include teachers. ITEST is especially interested in broadening participation of student groups from traditionally underrepresented in STEM and cognate intensive education and workforce domains. Strongly encouraged are projects that actively engage business and industry to better ensure K-12 experiences are likely to foster the skill-sets of emerging STEM and cognate careers. ITEST supports two project types: **Strategies** and **SPrEaD** (*Successful Project Expansion and Dissemination*) projects. Strategies projects address the creation and implementation of innovative technology-related interventions that support ITEST's objectives. SPrEaD projects support the wider and broader dissemination and examination of innovative interventions to generate evidence and understanding regarding contextual factors that operate to enhance, moderate, or constrain the desired results. All ITEST projects include activities designed to inform judgments regarding the feasibility of implementing strategies in typical delivery settings such as classrooms and out-of-school settings.

**Awards:** Total budget up to \$1,200,000 for 3 years

**Funding Instrument:** Standard Grant

**Due Date:** November 06, 2014

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**Grant Program: Long Term Research in Environmental Biology (LTREB)**

**Agency:** NSF, 15-503;

Directorate for Biological Sciences;

Division of Environmental Biology

**RFP Website:** <http://www.nsf.gov/pubs/2015/nsf15503/nsf15503.htm>

**Brief Description:** The Long Term Research in Environmental Biology Program intends to support decadal projects. Funding for an initial, 5-year period requires submission of a preliminary proposal and, if invited, submission of a full proposal.

Many important questions in ecology, ecosystem science, and evolutionary biology can only be addressed with long-term data. Research areas include, but are not limited to, the effects of natural selection or other evolutionary processes on populations; the effects of interspecific interactions that vary over time and space; population and community dynamics for organisms that have extended life spans and long turnover times; feedbacks between ecological and evolutionary processes; pools of materials such as nutrients in soils that turn over at intermediate to longer time scales; and external forcing functions such as climatic cycles that operate over long return intervals. Investigators often are constrained in addressing questions in these areas by the relatively short support periods associated with typical research awards. In recognition of this problem, the Division of Environmental Biology (DEB) encourages investigators to apply for LTREB awards. These awards are designed to provide the funding to maintain an ongoing, long-term research project for a period of a decade or longer.

**Awards:** Up to \$450,000

**Letter of Intent:** Not required

**Preliminary Proposal:** Required.

**Proposal Deadline:**

**Preliminary Proposal Due Date:** January 23, 2015 (due by 5 p.m. proposer's local time)

**Full Proposal Deadline:** August 03, 2015 (due by 5 p.m. proposer's local time)

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## **Environmental Protection Agency (EPA)**

### **Grant Program: Healthy Watersheds Consortium Grant**

**Agency:** U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds

**RFP Website:**

[http://water.epa.gov/polwaste/nps/watershed/upload/hw\\_consortium\\_grant\\_rfp.pdf](http://water.epa.gov/polwaste/nps/watershed/upload/hw_consortium_grant_rfp.pdf)

### **Brief Description:**

The U.S. Environmental Protection Agency (EPA) is soliciting proposals from eligible applicants to manage the Healthy Watersheds Consortium Grant. The objective of the Healthy Watersheds Consortium Grant is to accelerate and expand the strategic protection of healthy freshwater ecosystems and their watersheds across the country. The grant program will advance the protection of healthy watersheds by supporting an array of projects that assess, identify, communicate the value, and demonstrate

protection of these watersheds.

This RFP sets forth a process that will be used to competitively select a grant recipient who will administer a subaward program on a competitive basis to meet expected Healthy Watershed Program (HWP) environmental results. EPA plans to award one assistance agreement under this announcement and is soliciting proposals to fund an eligible applicant to manage the Healthy Watersheds Consortium Grant. For the purposes of this program, a consortium is one entity who is linked with or in a collaborative partnership with other groups or organizations having similar healthy watersheds protection goals that are also providing support to the HWP. EPA envisions a highly leveraged Healthy Watersheds Consortium Grant with multiple partners that provide leveraged funds beyond the cost share/match requirements of this RFP. The recipient will manage the assistance agreement including bringing together partners and providing subawards to eligible subawardees.

**Awards:** Up to \$3,750,000

**Funding Instrument:** Cooperative Agreement

**Due Date:** Proposals must be received in hard copy by the Agency Contact (See Section IV of this RFP) by 4:30 P.M. Eastern Standard Time (EST) January 5, 2015 or by electronic submission through Grants.gov by 11:59 P.M. EST January 5, 2015. Late proposals will not be considered for funding. Questions about this RFP must be submitted in writing via e-mail and must be received by the Agency Contact identified in Section VII by December 4, 2014. Written responses will be posted on EPA's website at:

<http://water.epa.gov/polwaste/nps/watershed/consortiumgrant.cfm>

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### **Grant Program: Scholarly Editions and Translations Grants**

**Agency:** National Endowment for Humanities

**RFP Website:** <http://www.neh.gov/grants/research/scholarly-editions-and-translations-grants>

**Brief Description:** Scholarly Editions and Translations grants support the preparation of editions and translations of pre-existing texts and documents of value to the humanities that are currently inaccessible or available in inadequate editions. Typically, the texts and documents are significant literary, philosophical, and historical materials; but other types of work, such as musical notation, are also eligible. Projects must be undertaken by a team of at least one editor or translator and one other staff member. These grants support full-time or part-time activities for periods of one to three years.

Applicants should demonstrate familiarity with the best practices recommended by the [Association for Documentary Editing](#) or the [Modern Language Association Committee on Scholarly Editions](#). Translation projects should also explain the approach adopted for the particular work to be translated. Editions and translations

produced with NEH support contain scholarly and critical apparatus appropriate to the subject matter and format of the edition. This usually means introductions and annotations that provide essential information about the form, transmission, and historical and intellectual context of the texts and documents involved.

Proposals for editions of foreign language materials in the original language are eligible for funding, as well as proposals for editions of translated materials.

**Awards:** Up to \$300,000

**Due Date:** December 9, 2014

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### **National Institutes of Health**

**Grant Program:** Biobehavioral and Technological Interventions to Attenuate Cognitive Decline in Individuals with Cognitive Impairment or Dementia (R15)

**Agency:** NIH, PA-15-016; R15 Academic Research Enhancement Award

[PA-15-017, R01](#) Research Project Grant

[PA-15-015, R21](#) Exploratory/Developmental Grant

**RFP Website:** <http://grants.nih.gov/grants/guide/pa-files/PA-15-016.html>

**Brief Description:** The purpose of this funding opportunity announcement (FOA) is to stimulate clinical research focused on biobehavioral or technological interventions to attenuate cognitive decline in individuals with dementia (such as Alzheimer's disease, Lewy body dementia, vascular dementia), mild cognitive impairment (MCI), or disease- or age-related cognitive decline. There is particular interest in interventions that can be implemented in community settings by the affected individual, informal caregivers, or others in the community. Research to inform the development of such interventions is also of interest, as well as research examining underlying mechanisms and biomarkers associated with response to interventions. It is anticipated that the results of this research will help affected individuals maintain independence and quality of life, improve their ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs), and additionally help to reduce stress, burden, and other poor outcomes in their caregivers.

**Awards:** Applicants may request up to \$300,000 in direct costs plus applicable Facilities & Administrative (F&A)/indirect costs for the entire project period of up to 3 years. Note when a consortium is involved, the \$300,000 direct cost limit is exclusive of consortium F&A costs. These can be requested in addition to the \$300,000 direct costs limit.

**Letter of Intent:** Not Applicable

**Open Date (Earliest Submission):** January 25, 2015

**Submission Deadline:** January 25, May 25 and September 25, 2014; Standard Dates

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**Grant Program:** NINDS Institutional Center Core Grants to Support Neuroscience Research (P30)

**Agency:** NIH, PA-14-013; P30 Center Core Grants

**RFP Website:** <http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-14-013.html>

**Brief Description:** This Funding Opportunity Announcement (FOA) invites applications for Center Core Grants that provide resources and facilities shared by a minimum of six NINDS-supported investigators, and supporting a wider base of neuroscience research. The proposed Centers should offer services and expertise that would be difficult or impractical to support in individual labs. The Centers are expected to capitalize on economies and synergies associated with shared resources, and to foster a collaborative environment among neuroscientists at host institutions.

### **Program Requirements**

To receive a Center Core Grant, an institution or consortium must meet the following program requirements.

- Cores and Core services must be specifically targeted to neuroscience research. Resources that are general to biomedical sciences are not appropriate for this FOA, unless a specific unmet neuroscience research need can be demonstrated.
- Centers must support at least six Program Director(s)/Principal Investigator(s) (PD(s)/PI(s)) who hold qualifying NINDS-funded research projects. Qualifying projects include R01 and other awards of similar scale, as specified in Section III.3. Additional Information on Eligibility.
- Support provided by the Cores to the qualifying projects must be for activities within the scope of the projects' funded Specific Aims.
- All of the qualifying investigators must be significant users of the Center, and no more than 25% of the effort from a single Core facility can be devoted to projects directed by any single investigator.
- The qualifying projects are necessary, but must not be the only projects supported by the Cores. It is expected that the Cores will serve a wide base of neuroscience investigators beyond the qualifying projects.
- A Core must provide services that are not available to investigators elsewhere either off-site (e.g., commercially) or via other facilities at the host institution. Exceptions to this requirement may be allowable in infrequent cases, but only if the Core adds substantial and demonstrable value both for potential users and for support of the NINDS mission.
- Core facilities and personnel should be focused on a service mission, with a goal of meeting the needs of a variety of potential users. Awards will not support independent research that is separate from the goal of service to Center users. Center personnel may receive partial funding from other sources for independent research, but their effort towards Center activities must be documented as described below.
- In infrequent cases, technology development may be appropriate for a given Core, but only insofar as this development enhances the service to Center users. Applicants considering technology development efforts are

encouraged to contact NINDS Scientific/Research staff to discuss alternative grant mechanisms.

**Awards:** Applications may request up to \$400,000 per year in direct costs for up to 4 years.

**Letter of Intent:** November 29, 2014

**Submission Deadline:** December 29, 2014, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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**Grant Program:** Spatial Uncertainty: Data, Modeling, and Communication (R21)

**Agency:** NIH, PA-15-009; R21 Exploratory/Developmental Research Grant

[PA-15-010](#), [R01](#) Research Project Grant

[PA-15-011](#), [R03](#) Small Grant Program

**RFP Website:** <http://grants.nih.gov/grants/guide/pa-files/PA-15-009.html>

**Brief Description:** The purpose of this funding opportunity announcement (FOA) is to support innovative research that identifies sources of spatial uncertainty (i.e., inaccuracy or instability of spatial or geographic information) in public health data, incorporates the inaccuracy or instability into statistical methods, and develops novel tools to visualize the nature and consequences of spatial uncertainty

#### **Scope of the FOA**

This FOA encourages a team of epidemiologists, statisticians, and experts in data visualization or health communication to attack the spatial uncertainty issue thoroughly. This FOA will facilitate multidisciplinary collaborations among scientists to promote research in identifying, quantifying, reducing, and communicating spatial uncertainty in health research to improve disease control and prevention. The FOA will also facilitate integration of data collection, information technology, visualization tools, statistical models, and health communication to reduce spatial uncertainty in planning, implementing and evaluating disease control programs.

**Awards:** The combined budget for direct costs for the two year project period may not exceed \$275,000. No more than \$200,000 may be requested in any single year. -

**Letter of Intent:** Not Applicable

**Open Date (Earliest Submission): January 16, 2015**

**Submission Deadline:** January 25, May 25 and September 25, 2014; Standard Dates [Standard dates](#) apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.