

January 22, 2016

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FEATURE STORY

Five finalists selected for IU Grand Challenges research program

Five teams have been selected to submit full proposals for funding through the [Indiana University Grand Challenges Program](#), the most ambitious research program in the university's history.

The program, [launched in September](#), will invest up to \$300 million over five years to address some of the most urgent challenges facing Indiana and the world.

The finalists were selected from 21 teams of IU faculty members that [submitted preliminary proposals in November](#). Applicants represented 20 schools on five IU campuses across the state.

"The Grand Challenges program offers a unique and exciting opportunity for IU to lead the way in developing responses to our society's most complex and important problems," said IU President Michael A. McRobbie. "The number of faculty members who participated in the preliminary proposals we received strongly reflects our faculty's commitment to transformative, innovative and interdisciplinary research that benefits the people of Indiana, the nation and the world."



Fred Cate, IU Vice President for Research

The selected preliminary proposals and their team leaders are:

- "Health Equity in Indiana and Beyond," David Burr, Distinguished Professor and associate vice chancellor for research at Indiana University-Purdue University Indianapolis, and Michael Reece, professor and associate dean at the IU School of Public Health-Bloomington.
- "Preparing for Change: Sustaining Nature's Assets, Public Health and Human Well-Being," Ellen Ketterson, Distinguished Professor in the IU Bloomington College of Arts and Sciences' Department of Biology.
- "Shaping Our Future: Knowledge, Science and Governance for Sustainable Water Resources," Todd Royer, associate professor in the IU School of Public and Environmental Affairs in Bloomington.
- "Transforming Environmental Protection and Health for Indiana and Beyond," Joseph Shaw, associate professor in the IU School of Public and Environmental Affairs in Bloomington.
- "Precision Medicine Initiative," Anantha Shekhar, associate vice president for clinical affairs at IU and executive associate dean for research at the IU School of Medicine on the IUPUI campus.

All preliminary proposals were evaluated by a [faculty review committee](#), which recommended a subset for further consideration to McRobbie, who named the five selected for development into full proposals.

IU Vice President for Research Fred Cate, whose office is overseeing the Grand Challenges Program, noted that all five proposals selected for further development focused on medicine or the environmental science and

policy, which are recognized strengths of IU.

"While we received proposals from a wide variety of fields, these five proposals impressed the reviewers as not only strong in their own right but as addressing issues of particular importance to the people and economy of Indiana," Cate said. "Moreover, these proposals draw effectively on a wide range of strengths at IU, including not only health care and environmental science, but basic sciences, information technology, and public policy and management."

Over the next four months, Cate said, members of the [Office of the Vice President for Research](#) and other campus and university offices will work with the teams to develop the strongest proposals possible.

In addition to substantial financial support, the IU Grand Challenges Program will also provide up to 30 new faculty positions, as well as support for faculty startup needs, graduate students, postdoctoral fellows, equipment and facilities for each funded proposal.

Full proposals from the finalists are due April 18, and McRobbie is expected to announce the one or two to be funded in June. More information on each proposal is available at the [Grand Challenges Program website](#).

ANNOUNCEMENTS

Call for 2016 IUPUI Research Day Poster Abstracts — DEADLINE: March 21



Research Day, April 8, 2016, provides an opportunity for the IUPUI faculty, staff, and students, and their academic, industrial, governmental partners, and the broader community, to come together and learn more about the research enterprise at IUPUI, explore new collaborations, and lay the foundation for new partnerships.

Faculty, postdoctoral fellow, professional student, graduate student and staff are eligible to submit poster presentations. (<https://iupui.infoready4.com/#competitionDetail/1746909>).

Guidelines

- *Abstracts will be competitively selected for poster presentation on the basis of scholarship, research and creative activity
- *Presenters may submit only one abstract
- *Accepted abstracts will be published as received on the Research Day website unless specified otherwise on the submission page.
- ***Students** – make sure your abstract has been seen and approved by your primary mentor!
- *Poster sessions are 90 minutes
- *Presenters are responsible for setting up and taking down posters at designated times
- *Posters may be landscape or portrait and approximately 36" x 60". Backer boards 40"x 60" are provided, as are easels and push pins
- *Display tables and electrical outlets are available for select presenters and must be pre-approved
- *Have 2-3 minutes of talking points prepared to "present" your work as attendees view your poster

Abstract Format

Title

Authors

Affiliations

Indiana University-Purdue University Indianapolis

- *No limit on title length
- *List authors and their affiliations in the style appropriate for your discipline
- *Center justify the heading

- *The abstract should be no more than **300 words**
- *Abstracts may be submitted as Word documents or PDF files
- *Include the presenter's last name in the title of the file

Abstract Submission

- *Abstracts are due **Monday March 21, 2016** by 11:59pm.
- *Applicants will be notified of the status of their submission after March 28, 2016.
- *Presenters will be asked to select:
 - *Category – Arts and Humanities; Public and Environmental Affairs; Education, Social and Behavioral Sciences; Informatics, Engineering and Technology; Physical Sciences; Life and Health Sciences; or Imaging
 - *Poster presentation session – 11:10am to 12:40pm; 1:10pm to 2:40pm; or either session is fine
 - *Status - Undergraduate Student; Graduate Student; Professional Student; Post Doc Fellow; Faculty; Staff
 - *Center for Research and Learning program or affiliate – UROP, MURI, DSRP, ITEC, RISE, URM, IPREP, or None

School of Education to host Great Lakes Equity Center regional equity focus session

Great Lakes Equity Center, in collaboration with the [Indiana University School of Education](#) on the Indiana University-Purdue University Indianapolis campus, will present the 2016 EquiLearn Focus Session, "Centering Equity in Educator Effectiveness: Assessing Equitable Practices in Schools and Classrooms," February 4. The session will take place from 8:30 a.m. to 4:30 p.m. in Room CE 309 of the IUPUI Campus Center, 420 University Blvd.

The Great Lakes Equity Center is one of 10 regional Equity Assistance Centers funded by the U.S. Department of Education. The center provides technical assistance, resources and professional learning opportunities related to equity, civil rights and systemic school reform throughout its six-state region: Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin.

EquiLearn Focus Sessions are exclusive, invitational opportunities for district and state leaders engaged in systemic equity partnerships with the Great Lakes Equity Center. Focus sessions provide participants with opportunities to engage in shared learning experiences with one another related to a targeted equity topic, and then to receive intensive one-on-one consultative support from Great Lakes Equity Center staff members.

For the February 4 focus session, equity leaders from across the six states will come to Indianapolis to engage in critical discussions and planning related to engaging in formative, continuous improvement efforts to monitor and assess the extent to which principles of equity are reflected in their classrooms and schools. The session will include presentations, facilitated discussions, individualized consultations and team planning.

"As we engage in equity work across our six states, we often hear the question 'How will we know we have achieved success?' or, and perhaps more importantly, 'How will we know that how we define success reflects essential tenets of equity?'" said Camille Warren, the center's assistant director for continuous improvement.

"Using data and information to inform decision-making is not groundbreaking or new to educators," Warren said. "But what this session will provide that is new is a lens and a framework for defining what educational equity really 'looks like,' and also how to begin to go about a process of examining the extent to which schools and classrooms uphold and reflect those tenets of equity."

For additional information about the Great Lakes Equity Center, visit [the center's website](#), call 317-278-3493 or email glec@iupui.edu.

INSTITUTE SPOTLIGHT

\$2.1M grant will advance research on women's and men's giving, increase understanding of motivations

Research about men's and women's giving will be accelerated as a result of a recent \$2.1 million research grant from the Bill & Melinda Gates Foundation to the Women's Philanthropy Institute at the [Indiana University Lilly Family School of Philanthropy](#) on the Indiana University-Purdue University Indianapolis campus.

"Increasing and improving philanthropy requires that we continually increase the depth and breadth of knowledge about giving," said Amir Pasic, the Eugene R. Tempel Dean of the IU Lilly Family School of Philanthropy. "We thank the Bill & Melinda Gates Foundation for their support of this important research, which will provide women and men donors with insights that help them give more effectively and better understand why they give differently."



Women's Philanthropy Institute

The wide-ranging, three-year project will marshal myriad approaches and multiple scholars to address two central areas of research. The first will identify and examine the factors that influence men and women to give more, to give more intentionally and to give more effectively. Researchers will explore the effects of issues such as donor education, household decision-making, life cycle and demographic changes, and technology and newer forms of philanthropy such as crowdfunding. The second area of research will focus on charitable giving to aid women and girls, including who gives, where they give, what factors influence their giving, how to increase giving and how to engage more men and younger women in supporting these causes.



Debra Mesch

The project will produce a variety of accessible, easy-to-use resources to inform and assist donors, nonprofits and others.

The new project builds on [insights developed under an earlier report](#) that identified, among other results, ways that women's and men's differing preferences, priorities and financial resources influence couples' charitable giving. The project also demonstrated that nearly half of all donors make contributions to causes that aid women and girls. Looking at giving by gender, it found that half of women donors and two out of five men donors give to these causes.

"The initial research enabled us to step back and take a comprehensive look at the field of gender and philanthropy, identify the related research that has been conducted to date, and determine the major gaps in the understanding of these issues," said Debra Mesch, Eileen Lamb O'Gara Chair in Women's Philanthropy, director of WPI and principal investigator for the project. "This new grant acknowledges that while knowledge about gender and philanthropy has come a long way in a relatively short period, we have barely scratched the surface, and many key research questions remain to be answered."

The Women's Philanthropy Institute is in the vanguard of building the body of knowledge on women's leadership in philanthropy and how women think about and practice their giving. Its [Women Give](#) research series and its other studies have revealed important new insights into women's giving. The knowledge and resources generated by the new grant will leverage and expand upon that foundation.

"Providing research that informs practice is a key tenet of the Lilly Family School of Philanthropy," said Una Osili, co-principal investigator for the project. "Through this new research, donors at all levels of giving -- nonprofit and fundraising professionals, financial and donor advisors, scholars, and others -- will gain greater understanding of gender and philanthropy, the capacity of women's giving, and opportunities to expand the donor base and increase charitable giving."

FACULTY SPOTLIGHT

IUPUI develops technique for detection of illicit enhancement of racing-tire performance

A new study from the [Forensic and Investigative Sciences Program](#) of the [School of Science](#) explores the illicit treatment of racing tires with volatile chemicals to improve function and presents a new and effective method to determine if tires have been

doctored.

Using a technique they developed specially for this purpose, the IUPUI researchers -- led by principal investigator John Goodpaster, Forensic and Investigative Sciences director and associate professor of chemistry and chemical biology -- analyzed tires from the vehicles of first-, second- and third-place finishers of midget car races across the United States. Approximately 15 percent tested positive for illicit chemical treatment.



John Goodpaster, Ph.D.

Concerns about cheating in auto racing are increasing with the introduction of commercial products claiming to have the ability to boost performance while remaining "undetectable." Tire treatments, in particular, have become a major concern for the administrative bodies that regulate motorsports.

Midget cars, called "speedcars" outside of the U.S., are open vehicles built around a tubular frame with a very high power-to-weight ratio. Many of the biggest names in IndyCar and NASCAR racing drove midget cars earlier in their careers.



USAC midget cars

Midget cars race on small tracks requiring adroit handling of tight curves. The prohibited commercial tire-treatment products, applied in liquid form days before the race to evade detection, soften the tires, enabling better handling of curves and higher lap speeds.

"We used a technique similar to that used by forensic scientists to detect trace amounts of gasoline in fire debris," said Goodpaster. "This kind of technique had not been previously used to detect performance-enhancing tire treatments. We were able to identify even low levels of illicit chemicals, which would result in disqualification if found in a competition. Out of 70 tires, 10 returned a positive result for the presence of prohibited treatments. As word circulated that we were testing tires, incidence of illegal treatments decreased."

Goodpaster notes that in addition to detecting prohibited tire treatments, the sensitive technique developed at IUPUI could be used to evaluate race car fuel, motor oil, lubricants and cooling agents -- all of which could be chemically altered to provide an unfair advantage to a vehicle

"As in other sports, there is a temptation to bend the rules," Goodpaster said. "Hence, motorsports administrative bodies are increasingly cracking down on abuse. Tire treatment with prohibited products and other illicit doctoring in motorsports is analogous to doping by athletes in search of gold medals, lucrative contracts or other recognition."

["Detection of Prohibited Treatment Products on Racing Tires Using Headspace Solid Phase Microextraction \(SPME\) and Gas Chromatography/Mass Spectrometry \(GC/MS\)"](#) is published online ahead of print in *Analytical Methods*, a journal of the Royal Society of Chemistry. Authors in addition to Goodpaster are William D. Kranz, a doctoral candidate in chemistry at IUPUI, and Clinton J. Carroll, an IUPUI undergraduate majoring in forensic and investigative sciences.

The study was supported by a grant from the United States Auto Club, which also provided the tire samples.

TRANSLATIONAL RESEARCH IMPACT

IUPUI Water Symposium: Water as Indiana's Grand Challenge and Grand Opportunity

Overlooking the Canal at the Indiana State Museum was a fitting venue for IUPUI's 2nd annual symposium on water. The November 16th event brought the research, policy, and remediation sectors together to address water quality and quantity in an urban focus.

As political science professor and co-organizer William Blomquist put it,

"The presentations at the symposium provided a glimpse of the breadth and depth of water research taking place at IUPUI and the excellent turnout demonstrated the growing interest in this subject in Indiana."



Few things carry greater importance than water. Entire regions can live or die because of it. Too much, too little, too soon, too late, too sudden, too slow, and too toxic are all degrees of interplay between humans, Earth, and water. Jason Kelly, Director of the IUPUI Arts and Humanities Institute, spoke persuasively on the need to include the humanities in these complex scientific discussions. He said, "Water intersects every aspect of life and work. Curing the planet's ills will take vision and cooperation, not to mention new perspectives from across the spectrum of research and scholarship."

Professor Gabriel Filippelli's research documented mercury contamination in the White River from IPL's South Harding Street generating station. It contributed valuable data to the decision to switch the plant from coal to natural gas, which is a huge win for Marion County. Even with significant changes, environmental improvement is not a fast process. Filippelli offered context to the human impact on water. "Humans have transformed the environment so much that if all activity stopped now, reclamation would still take millennia."

Ounces of White River fish a pregnant woman may safely eat per year: 4

Topics ranged the broad, conceptual themes, such as *How do we change cultural practices that have major impacts on our environment?* to more practical and immediate questions, such as *How can I reduce nitrates from my farm's runoff?*

Those in attendance were impressed by the depth and breadth of the presentations. That's a good indication that IUPUI is getting the word out about water-related research on campus. Regardless of where next year's symposium will be held, early indications show that the 2017 event will be larger.

OVCR INTERNAL GRANT DEADLINES

Release Time for Research (RTR): IUPUI maintains a robust research enterprise. To support faculty with adequate time to prepare competitive proposals, the IUPUI Office of the Vice Chancellor for Research has developed the Release Time for Research (RTR) internal funding mechanism. This funding program allows IUPUI faculty a "buyout" of teaching time to prepare high-quality grant/contract proposals for submission to external funding agencies. It also supports non-tenure track faculty who are full-time senior lecturers or clinical track faculty possessing terminal degrees relevant to their fields, and who have a desire to engage in research or creative activity in an area that directly relates to their teaching or service mission. *The next RTR application deadline is February 1.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

IUPUI ARTS AND HUMANITIES INTERNAL GRANT (IAHI): The IAHI Grant Program exists to support campus-wide attainment of excellence in research and creative activity in arts and humanities. It is designed to enhance the research and creative activity mission of IUPUI by supporting research projects and scholarly activities that are conducted by arts and humanities faculty. *The IAHI application deadline is March 1.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

Developing Diverse Researchers with InVestigative Expertise (DRIVE): The Developing Diverse Researchers with InVestigative Expertise (DRIVE) program is designed to enhance the diversity and research and creative activity mission of IUPUI. Faculty from historically under-represented populations, usually defined as African-American, Latino-American, Native American, Pacific Islanders, and women, are particularly encouraged to apply. The DRIVE program supports projects that have the potential for sustainability through external funding. *The next DRIVE application deadline is March 1.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

OTHER INTERNAL GRANT DEADLINES

Apply by February 1 for postdoctoral training awards in translational research

The Indiana Clinical and Translational Sciences Institute (CTSI) seeks applicants for postdoctoral training awards in translational research. Translation may involve applying discoveries made during research (in the lab, through animal studies, etc.) to the development of clinical trials and studies in humans, or carrying out research aimed at enhancing the adoption of best practices, or both.

Funding is for two years (with the second year of funding contingent upon review and demonstration of satisfactory progress). Benefits include salary support as well as health insurance. Trainees will be required to attend a National CTSA meeting and present at several Indiana CTSI gatherings during the academic year.

Applications must be submitted by February 1, and awards will start on April 1. Interested candidates needing help identifying an appropriate co-mentor should contact the Indiana CTSI at their institution.

For information on eligibility and submission details, visit indianactsi.org.

OVCR EVENTS AND WORKSHOPS

Basic Proposal Development

NSF CAREER Series

The Faculty Early Career Development (CAREER) Program is a National Science Foundation-wide activity offering prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education, and the integration of education and research within the context of the mission of their organizations. The NSF deadlines for submission of proposals are expected to be July 23, 24, and 25, 2016, depending on discipline. If you are interested in applying and would like assistance by OVCR staff, be sure to attend the following sessions.

Session 1: General Information & Eligibility

Target Audience: Early Career Faculty in Disciplines Funded by NSF

When: Friday, **February 26, 2016** | 11:30am - 1:00pm

Where: University Library, Room 1126

A brief review of the guidelines and eligibility requirements will be presented. Attendees will also learn what resources are available to support development of a competitive proposal to the National Science Foundation CAREER program.

Register: <https://crm.iu.edu/CRMEvents/NSFCAREERSession1022616/>

Session 2: Panel of Successful Applicants

Target Audience: Early Career Faculty in Disciplines Funded by NSF

When: Friday, **March 25, 2016** | 11:30am - 1:00pm

Where: University Library, Room 1126

As a follow-up to the initial introductory session in February, recent NSF CAREER awardees will share tips on securing funding through this program and answer questions from attendees.

Register: <https://crm.iu.edu/CRMEvents/NSFCAREERSession2032516/>

JagStart – IUPUI Student Idea Pitch Competition

Target Audience: General

When: Friday, March 4, 2016 | 1:00pm - 5:00pm

Where: University Library, Lilly Auditorium

JagStart is an annual student idea pitch competition that rewards IUPUI students for their innovative ideas to solve challenges facing the nation and the world. The emphasis of the competition is on finding answers to real-world problems through new approaches, products, services, or business ventures. In a three-minute "elevator" pitch format, individuals or teams are asked to propose original solutions to pressing social and economic issues.

Register: <https://crm.iu.edu/CRMEvents/JagStart2016/>

Exploring NSF Research Experiences for Undergraduates

Target Audience: IUPUI and IUPUC Faculty Interested in Mentoring Undergraduate Researchers

When: Friday, April 1, 2016 | 2:00pm - 3:30pm

Where: University Library, Room 1126

Discussion will focus on the funding opportunities that faculty can apply for such as the NSF REU program to support student research capabilities. In addition, discussion leaders will explain resources available through the Office of the Vice Chancellor for Research to support faculty ventures designed specifically to initiate and conduct projects that engage a number of undergraduate students in thematically-linked, ongoing research projects in meaningful ways. For those with existing NSF funding, supplemental grants to add undergraduate researchers to currently funded NSF projects will also be covered. The NSF deadline for submission of REU site proposals is expected to be August 29, 2016. If you are interested in applying and would like assistance by OVCR staff, be sure to attend.

Register: <https://crm.iu.edu/CRMEvents/ExploringNSFREU040116/>

OTHER EVENTS AND WORKSHOPS

Register for March 4 RESPECT palliative care conference

Registrations are now being accepted for the Friday, March 4, conference, "Let's Talk Palliative Care: Continuity Across Settings" sponsored by the RESPECT Center. The conference brings together clinicians and researchers interested in evidence-based palliative and end-of-life care to help enhance clinical practice and foster new partnerships for translational research.

The conference will be held at the Ritz Charles in Carmel. For more information or to register, visit the [RESPECT Center website](#).

CURRENT EXTERNAL FUNDING OPPORTUNITIES

Funding opportunities in this section include selected current grant announcements from federal agencies for new initiatives and changes to existing programs. Announcements with limited scope are not listed here but instead are sent directly to IUPUI School Deans. For comprehensive coverage of funding opportunities, please use the links below to search online tools.

NATIONAL INSTITUTES OF HEALTH

Novel Nucleic Acid Sequencing Technology Development (R01): This opportunity solicits applications to develop novel technologies that will enable new approaches to DNA and direct RNA sequencing. Applicants may propose to develop novel complete sequencing systems, investigate challenges underlying key novel system components, or propose improvements of at least an order of magnitude improvement to existing systems. Exploration of methods other than those currently in use is highly encouraged. High-risk/high-payoff applications are appropriate to achieve the goals of this opportunity. *Deadlines: July 14, 2016.*

<http://grants.nih.gov/grants/guide/rfa-files/RFA-HG-15-032.html>

Role of Human Virome in Heart, Lung, & Blood Health & Resilience (R61/R33): The human virome includes viruses that infect host cells, virus-derived elements in our chromosomes, and viruses that infect other types of organisms that inhabit the human body. The virome may influence the host in profound ways

independent of classical viral diseases. The purpose of this Funding Opportunity Announcement (FOA) is to support research to identify and evaluate the basic underlying molecular and physiological mechanisms by which the virome may influence heart, lung, and blood (HLB) health and resilience. *Deadlines; Letter of Intent: May 24, 2016; Application: June 24, 2016.* <http://grants.nih.gov/grants/guide/rfa-files/RFA-HL-17-002.html>

Research to Action: Assessing and Addressing Community Exposures to Environmental

Contaminants (RO1): This opportunity encourages applications using community-engaged research methods to investigate the potential health risks of environmental exposures of concern to the community and to implement an environmental public health action plan based on research findings. The overall goal is to support changes to prevent or reduce exposure to harmful environmental exposures and improve the health of a community. *Deadline: June 5, 2016.* <http://grants.nih.gov/grants/guide/pa-files/PA-12-153.html>

NATIONAL SCIENCE FOUNDATION

Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS):

Factors contributing to stresses in the food, energy, and water (FEW) systems include increasing regional and social pressures and governance issues as result of land use change, climate variability, and heterogeneous resource distribution. These interconnections and interdependencies associated with the food, energy and water nexus create research grand challenges in understanding how the complex, coupled processes of society and the environment function now, and in the future. There is a critical need for research that enables new means of adapting to future challenges.

The FEW systems must be defined broadly, incorporating physical processes (built infrastructure and new technologies for more efficient resource utilization), natural processes (biogeochemical and hydrologic cycles), biological processes (agroecosystem structure and productivity), social/behavioral processes (decision making and governance), and cyber elements. Investigations of these complex systems may produce discoveries that cannot emerge from research on food or energy or water systems alone.

The four tracks of INFEWS research are: 1) FEW System Modeling; 2) Visualization & Decision support for Cyber-Human-Physical Systems at the FEW Nexus; 3) Research to Enable Innovative Solutions; and 4) Education and Workforce Development.

Deadline: March 22, 2016. See [Innovations at the Nexus of Food, Energy and Water Systems \(INFEWS\)](#) website.

Grant Opportunities for Academic Liaison with Industry (GOALI): GOALI promotes university-industry partnerships by making project funds or fellowships/traineeships available to support an eclectic mix of industry-university linkages. Special interest is focused on affording the opportunity for 1) faculty, postdoctoral fellows, and students to conduct research and gain experience in an industrial setting; 2) industrial scientists and engineers to bring industry's perspective and integrative skills to academe; and 3) interdisciplinary university-industry teams to conduct research projects.

This solicitation targets high-risk/high-gain research with a focus on fundamental research, new approaches to solving generic problems, development of innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry. GOALI seeks to fund transformative research that lies beyond that which industry would normally fund.

The NSF directorates participating in GOALI are the Directorate for Biological Sciences (BIO), the Directorate for Computer and Information Science and Engineering (CISE), the Directorate for Education and Human Resources (EHR), the Directorate for Engineering (ENG), the Directorate for Geosciences (GEO), the Directorate for Mathematical and Physical Sciences (MPS), the Directorate for Social, Behavioral, and Economic Sciences. *Deadline: Continuous, check with directorate.* http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504699

U.S. Dept. of Defense

Helmet-Mounted Displays: Deployable flight simulation and mission rehearsal capabilities are rapidly becoming high priority in the flight training community. However, these high technology training requirements cannot be satisfied without a low cost and compact display system that provides realistic, high detail out-the-

window scenery while being compatible with heads up display HUD graphics and real or glass cockpit imagery. The helmet-mounted display that represents the most promising technology to satisfy these requirements, must be developed and evaluated rapidly if these high priority training requirements are to be satisfied. Research associated with helmet-mounted displays should emphasize increased field-of-view, reduction of weight and inertia of the helmet and optics for more realistic comfort and fit, improvements in display resolution and brightness, and capacity to simulate both day and night operations. Another area of interest for HMDs is the next generation of operational HMDs and how to simulate or stimulate the operational HMDs in a traditional flight simulator. *Deadline: continuous.* <https://www.fbo.gov/index?id=1ae64b3d1f09246786c6f66722fc266f>

U.S. Dept. of Health and Human Services

BRAIN Initiative: Next-Generation Invasive Devices for Recording and Modulation in the Human Central Nervous System (U44): The purpose of this opportunity is to encourage small business concerns (SBCs) to pursue translational non-clinical studies and clinical studies for recording and/or stimulating devices to treat nervous system disorders and thereby better understand the human brain. The program will utilize a cooperative agreement mechanism to support the non-clinical studies necessary for the submission of an Investigational Device Exemption (IDE) for a Significant Risk (SR) study or to obtain Institutional Review Board (IRB) approval for a Non-Significant Risk (NSR) study, and the subsequent small clinical study (e.g., Early Feasibility Study).

Activities supported in this program include implementation of clinical prototype devices, non-clinical safety and efficacy testing, design verification and validation activities, and pursuit of regulatory approval for, and implementation of, a single small clinical study. The small clinical study should provide data to answer key questions about the function or final design of a device. This final device design may require most, if not all, of the non-clinical testing on the path to more advanced clinical trials and market approval. The clinical study is expected to provide information that cannot be practically obtained through additional non-clinical assessments (e.g., bench top or animal studies) due to the novelty of the device or its intended use. *Deadline: April 26, 2016.* <http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-16-011.html>

NOTE: All faculty, researchers, and scientists on continuing contracts at IU interested in applying for Department of Defense funding are eligible for assistance by the consulting firm--Cornerstone Government Affairs-- arranged by the Vice President for Research. Those interested in securing assistance from Cornerstone must submit a two-page summary of their research project and a CV or biosketch to the VP for Research Office at vpr@iu.edu. Prior to submission, the IUPUI Office of the Vice Chancellor for Research is offering assistance with the two-page summaries. For more information, contact Ann Kratz akratz@iupui.edu.

IDENTIFYING FUNDING OPPORTUNITIES

On-line search tools are available to IUPUI investigators who are interested in identifying funding opportunities in their areas of interest.

Community of Science (COS): COS is a primary on-line search tool for identifying funding opportunities. To take advantage of this tool, register at <http://www.cos.com/login/join.shtml>. Once you have completed the short registration process, you can personalize your search by selecting the option entitled "launch your workbench". You can access federal, local, corporate, foundation, nonprofit and other funding opportunities using key terms and save the results of up to 20 searches and have them delivered to you weekly via email.

National Institutes of Health (NIH) "NIH Guide": To take advantage of this search tool, register at <http://grants.nih.gov/grants/guide/listserv.htm>. It allows you to receive discipline specific funding opportunities that are delivered to you weekly via email.

National Science Foundation (NSF) "MyNSF": To take advantage of this search tool, register at http://service.govdelivery.com/service/multi_subscribe.html?code=USNSF&custom_id=823. It allows you to receive discipline specific funding opportunities that are delivered to you weekly via email.

Federal Business Opportunities "FedBizOpps": FedBizOpps is the single government point-of-entry for Federal government procurement opportunities over \$25,000. To take advantage of this search tool, visit

<https://www.fbo.gov>. Opportunities found at this site include, but are not limited to, presolicitations and special notices for research and service contracts for specific projects and some national centers and surveys that would not be found in Grants.gov and may not be found in the Community of Science.

Limited Submission Funding Opportunities:

Many federal agencies and foundations offer grants, awards and fellowships that limit the number of applications that can come from one institution or require special handling. In order to comply with agency and foundation guidelines and increase the chances of Indiana University (IU) succeeding in such limited submissions and special handling opportunities, IU policies and procedures are in place and are utilized by the Office of the Vice Chancellor for Research and other IU research offices to facilitate internal coordination and competitions.

Individuals interested in responding to limited submission opportunities must inform the Office of the Vice Chancellor for Research about their intent to apply to a given limited submission opportunity, such that they can be included in the internal review and selection process. Failure to do so may disqualify individuals from consideration for submission to the funding opportunity.

Individuals interested in a limited submission opportunity or have any questions about the internal coordination process, contact Etta Ward at emward@iupui.edu or 317-278-8427. For a description of upcoming limited submission funding opportunities, as well as guidelines and application forms, go to: http://research.iu.edu/limited_sub.shtml. Please note that this is not a comprehensive list, and that any external funding opportunity that imposes any type of submission limitation is subject to the IU limited submission policy and procedures.

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