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Research@MARYLAND

CONNECTING *the* UNIVERSITY *of* MARYLAND RESEARCH COMMUNITY

Researchers Receive $700K in UM/UMB Seed Grant Funding

The University of Maryland (UM) and University of Maryland, Baltimore, (UMB) recently announced a significant increase in the amount of funding for a program that encourages collaborative research between the two institutions.

Nine research projects will split about $700,000 in Seed Grant Program funds, compared to $450,000 last year, when the two universities launched the program in hopes of increasing the number of funding proposals submitted to the National Institutes of Health. The goal is to invest relatively small amounts of funding on proposals now to provide proof of concept, which can then be leveraged into federal research funding later.

"There are many opportunities within the NIH extramural program that target teams of scientists, engineers and clinicians addressing specific health issues," says **Ken Gertz**, associate vice president for research development. "We want to explore these opportunities more aggressively and collaboratively with UMB."

This year's round of funding also saw a big jump in the number of research project ideas requested from the program: 49 proposals were submitted, up from 30 in 2007.

Submissions from UM came from six colleges and schools—twice as many as last year—with researchers in the behavioral and social sciences, computer, mathematical and physical sciences and public health joining faculty from engineering, chemical and life sciences and agriculture in applying for the competitive, peer-reviewed grants.

Gertz attributed the increased faculty interest in the program to a desire to collaborate beyond disciplinary and campus boundaries.

"The Seed Grant Program stimulates ideas that can take advantage of the unique strengths of both institutions, which allows for some very exciting research possibilities," says **Carl Lejuez**, professor of psychology at UM, who will collaborate with faculty at UMB in exploring innovative methods in substance abuse treatment.

Mel Bernstein, vice president for research at the university, says another goal of the program this year is an effort to recognize collaborations between junior and senior researchers, providing mentorship to junior researchers.

"We see this as an excellent way to help prepare the next generation of researchers and an investment in the future research efforts of our two universities," he says.

The Seed Grant Program received 49 proposals for 2008. The winning projects and their respective principal investigators are:

- **Yu Chen** (UM) will work with Reuben Mezrich (UMB) to combine optical coherence tomography with MRI technology in creating a novel multiscale imaging platform to improve the detection of breast cancer, and with Cha-Min Tang (UMB) to develop a needle-based forward imaging device for neurosurgical guidance.
- **William Fourney** (UM) will work with Gary Fiskum (UMB) to develop neuroprotective, clinically relevant interventions for traumatic brain injury caused by exposure to explosions.
- **Carl W. Lejuez** (UM) will work with Kevin W. Chen (UMB) to explore the use of integrative meditation as a supplement to standard drug use treatment for cocaine addicts.
- **Tongtong Wu** (UM) will work with Sharon M. Gordon (UMB) to study behavioral and molecular-genetic contributions to human pain experience.
- **Yang Tao** (UM) will work with Eliot Siegel (UMB) in developing a multimodal, ultra-low dose X-ray imaging method that combines multispectral, narrow band X-rays and direct X-ray photon energy conversions, reducing the risk for radiation-induced cancer.
- **Mei-Ling Ting Lee** (UM) will work with Ebere Onukwugha (UMB) in exploring the role of medical noncompliance and mental illness in predicting hospital admissions among veterans with congestive heart failure.
- **Volker Briken** (UM) will work with Andrei Medvedev (UMB) on better understanding the molecular mechanisms of impaired sensing of Mycobacterium tuberculosis by human TLR2 and TLR4 polymorphic variants.
- **Kevin McIver** (UM) will work with Mark Shirtliff (UMB) in identifying determinants essential for biofilm formation and virulence in methicillin-resistant staphylococcus (MRSA) using a global genetic approach.
- **Yu Chen** (UM) will work with Bruce Yu (UMB) to develop optical coherence elastography for noninvasive quantification of biomechanical properties of peptide-based force-responsive biomaterials and to correlate the optical imaging results with dynamic rheometry.

THE FEDERAL CORNER

NOVEMBER UPDATE AND ANALYSIS FROM THE OFFICE OF FEDERAL RELATIONS

Scientific Associations Send Message to Candidates

Prior to the presidential election, the American Association for the Advancement of Science and the Association of American Universities drafted and sent a letter to presidential candidates U.S. Sens. Barack Obama and John McCain urging them to appoint a science adviser by Jan. 20. Additionally, the organizations also requested that the position of the adviser be given the title of assistant to the president for science and technology and assign the position a Cabinet rank. This is the same status given to the director of the Office of Management and Budget, the administrator of the Environmental Protection Agency and the U.S. Trade representative.

This request was based on the premise that the next president will need long-term scientific and technological solutions to the pressing issues of financial and regulatory reform, health care and rising energy costs, global climate change and U.S. economic competitiveness and national security. This, the organizations insist, necessitates the reliance and presence of sound advice early and often in the new administration. Both organizations urged various members of the business, education and scientific communities to sign the letter.

FY09 Continuing Resolution Signed into Law

On Sept. 30, President Bush signed into law the FY09 Continuing Resolution, effectively funding the federal government until next March 6. The measure, however, freezes funding for most federal agencies at FY08 levels, including domestic research agencies of major interest to research institutions.

Look to the Federal Corner for more information regarding higher education and the federal government. If you have a specific matter you would like to see discussed in this column, please contact Rae Grad, director of federal relations, at rgrad@umd.edu.

Associate Professor Jaydev Desai Receives $1.3 Million NIH Grant

Jaydev P. Desai, associate professor of mechanical engineering and director of the Robotics, Automation, Manipulation and Sensing, or RAMS, laboratory, has been awarded a $1.3 million grant from the National Institutes of Health, or NIH. The NIH R01 grant was awarded to Desai for his project on "Robotic Haptic Feedback System for Biopsy and Ablation of Breast Tumors."

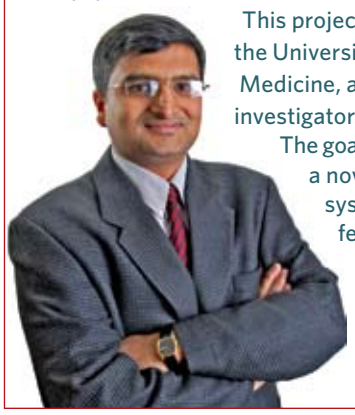


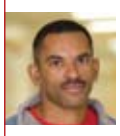
PHOTO BY AL SANTOS

This project is in collaboration with the University of Maryland School of Medicine, and Desai is the principal investigator.

The goal of the project is to develop a novel teleoperated robotic system with "sense of touch" feedback capability, providing accurate feedback to a physician performing certain procedures like a breast biopsy.

NEW FACULTY

In the coming months, we will continue to introduce you to new faculty and research scientists who have joined the Maryland research community.



Cerruti Hooks is an assistant professor of entomology. His research interests include ecological pest management, sustainable agriculture and biological control.

Vivian Hoffmann is an assistant professor of agricultural and resource economics. Her research is focused on development economics, health economics and experimental economics.

Gnisha Yvonne Dinwiddie is an assistant professor of African American studies. Her research interests include health disparities, socioeconomic status and health, social epidemiology, social psychology, student persistence in higher education and biodemography.

Julie Koser is an assistant professor of German. Her research interests include the construction and dissolution of gender myths; the interplay between gender, national identity and citizenship; gender and warfare; literary and visual depictions of women and violence; and the body as site of social and political rebellion.

Donald Bolger is an assistant professor of human development. His research focuses on how the brain learns to read, the sources of reading skill and impairment and how children learn the meaning of words.

Restoring Ancient Stabiae Project Offers Unique Research Opportunities

The Restoring Ancient Stabiae Foundation, or RAS, is committed to the study and preservation of ancient Roman Stabiae, the largest concentration of Roman villas in the entire Mediterranean world. "The goal is to transform this site, only three miles from Pompeii, into a world-class archeological park," says **Matthew Bell**, professor of architecture and vice president of the RAS Foundation. The University of Maryland is the lead academic institution in the U.S. and a member of the board of directors for this unique archaeological project.

The project is also an opportunity to conduct research in such areas as garden archeology, architectural restoration and preservation and civil engineering. Some faculty members from the university, which is part of a working agreement with the superintendency of archeology of Pompeii, have already become involved. R. Lindley Vann, professor of architectural history and an archeologist, is conducting research on garden archeology, for example. Bell hopes others will join in the research.

"We are learning about our ancient past and how best to preserve it," he says. In fact, the goal is to create "one of the world's first sustainable archeological sites," adds Bell.

This includes not just uncovering and preserving artifacts, but developing a master plan that involves issues of engineering, transportation, business development and cultural tourism. As such, "an interdisciplinary approach to this work is going to be key," says Bell.

Faculty interested in learning more about the project and its research opportunities are encouraged to attend a meeting held the first Friday of each month at the School of Architecture, Planning, and Preservation. For more information, contact Bell at mattbell@umd.edu.

FACULTY AWARDS & HONORS

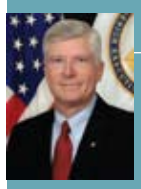
Rama Chellappa, Minta Martin Professor of Engineering, has been elected president of the newly formed Institute of Electrical and Electronics Engineers (IEEE) Biometrics Council. This council will coordinate all biometrics-related activities sponsored by the IEEE. Chellappa holds appointments with the Department of Electrical and Computer Engineering, the Institute for Advanced Computer Studies and the Department of Computer Science.

Thomas S. Wallsten, chair of psychology, has accepted an invitation by Environmental Protection Agency Administrator Stephen Johnson to serve a three-year term on the agency's Science Advisory Board. His term began Oct. 1. Wallsten's research interests are in behavioral decision theory, including the areas of judgment, choice, probabilistic inference and measurement.

Carol Espy-Wilson, a professor who holds appointments with the Department of Electrical and Computer Engineering and the Institute for Systems Research, has been appointed a Fellow of the Radcliffe Institute for Advanced Study for 2008-2009. Espy-Wilson's research is focused on the development of a landmark-based, robust speech recognition system that combines statistical-based methods with prosodically-guided models of speech variability.

Katepalli R. Sreenivasan, Distinguished University Professor of physics, has received the 2008 Nicholson Medal for Human Outreach of the American Physical Society. Sreenivasan was honored for his contributions to the humanitarian aspects of physics and recognized for significant contributions to fostering international collaborations and promoting the advancement and education of early career scientists from the developing world.

UPCOMING EVENTS & CONFERENCES



DIVISION OF RESEARCH SEMINAR SERIES

Research Priorities and Future Directions for the Army Research Lab

Featured speaker is John Miller, director of the Army Research Lab.

Monday, Dec. 8, 11 a.m. to noon
Maryland Room, Marie Mount Hall
For more information: geronimo@umd.edu

Save the Date

SEED GRANT PROGRAM SEMINAR AND RECEPTION

The UM/UMB Seed Grant Program will host its second annual seminar and reception on **Tuesday, Dec. 16** at the University of Maryland BioPark, Building Two, 801 West Baltimore St. in Baltimore. The seminar will be held from 2 p.m. to 4 p.m. and the reception from 4 p.m. to 6 p.m. For more information call 301-405-6499 or email spesce@umreserach.umd.edu.

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Mel Bernstein, vice president for research

Top right image courtesy of the Restoring Ancient Stabiae (RAS) Foundation