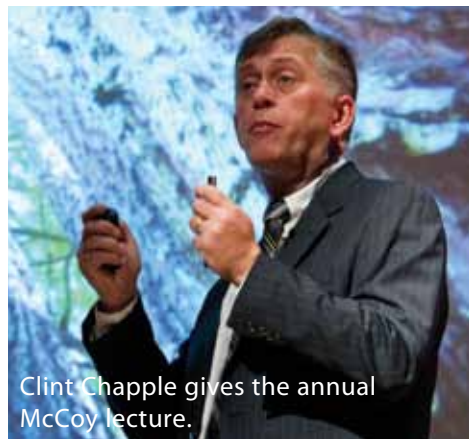


DIMENSIONS of DISCOVERY



Rakesh Agrawal receives the National Medal of Technology and Innovation from President Obama.



Clint Chapple gives the annual McCoy lecture.



» Excellence in Research

Welcome

"Be aware of what others are doing, applaud their efforts, acknowledge their successes and encourage them in their pursuits. When we all help one another, everybody wins." — Jim Stovall

National Medal of Technology and Innovation. Presidential Early Career Award. National Science Foundation CAREER awards. Spirit of the Land Grant Mission Award ... The honors recently bestowed on our faculty members not only acknowledge the valuable work they are doing in their disciplines, but also propel us all to greater achievement. Read on to discover their accomplishments, and be inspired. ■

Nearly 300 Purdue faculty and staff gathered in November for the Excellence in Research Awards dinner, celebrating the accomplishments and contributions of Purdue's research community.

Among the honorees were faculty members who had received college or school awards for outstanding research in 2011, along with 262 Seed for Success honorees — principal investigators and co-investigators garnering awards of \$1 million or more. This year, 110 faculty members were designated as first-time Seed for Success recipients.

"This is an evening to share in the success of the scholarly contributions to excellence in research at Purdue. It is my privilege to extend my appreciation to the many extraordinary scholars at Purdue," said Richard Buckius, vice president for research, in opening remarks.

As part of the ceremonies, Professor Clint Chapple was presented with the 2011 Herbert Newby McCoy Award for his pioneering efforts in plant cell wall formation. See pages 8-9 of this newsletter for more photos. ■

Inside »

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Army Research Laboratory honors Purdue profs with Director's Challenge Coin Awards

Two Purdue University faculty members have received Army Research Laboratory Director's Challenge Coin awards from the U.S. Department of Defense for developing technologies credited with saving lives on the battlefield.



Edward Delp



William Chappell

The researchers are **Edward J. Delp**, the Charles William Harrison Distinguished Professor of Electrical and Computer Engineering and Professor of Biomedical Engineering, and **William J. Chappell**, an associate professor of electrical and computer engineering.

"It is extremely rare for a private citizen to receive this award," said **Melba M. Crawford**, Purdue's associate dean of engineering for research. "It's a terrific honor that recognizes their exemplary research and contributions to national defense."

Delp and Chappell are part of a Multi-University Research Initiative (MURI) that includes work on a project called Standoff Inverse Analysis and Manipulation of Electronic Systems (SIAMES). They were recognized for contributions having the potential to substantially improve the performance of the next-generation of military radio communications and sensor systems. ■

Engineering education professor receives prestigious PECASE Award

Demetra C. Evangelou, an assistant professor in the School of Engineering Education, has been chosen for a prestigious Presidential Early Career Award for Scientists and Engineers (PECASE).



Evangelou was among 94 researchers named this fall as recipients of PECASE, the highest honor given by the U.S. government to science and engineering professionals in the early stages of their independent research careers.

"I am honored because the award recognizes not only my work, but also the need to better understand how children are influenced to pursue engineering careers," says Evangelou, who is studying how engineering affects human development and how classroom environments influence children from 3-5 years old as they begin thinking about engineering.

"Research in this area is going to help us address a global shortage of engineers and the lack of diversity in engineering fields." ■

Education fellows participate in National Academy of Sciences summer institute

The National Academy of Sciences has named **Laurie Iten**, an associate professor of biological sciences, and **Stephanie Gardner**, a continuing lecturer in biological sciences, as National Academies Education Fellows in the Life Sciences for the 2011-2012 academic year. Iten and Gardner were honored for their participation in the 2011 National Academies Summer Institute on Undergraduate Education in Biology.



Laurie Iten

Teams from 16 research universities from across the United States assembled in Madison to develop or adapt a series of “teachable tidbits” that they will be implementing and assessing throughout the 2011-2012 academic year. Teams also will be designing mentoring seminars to enhance the ability of graduate students, postdoctoral fellows, and others to mentor undergraduates in the research laboratory. ■



Stephanie Gardner

Nutrient management expert to receives Spirit of Land Grant Mission Award

Agronomy professor **Brad Joern**, who has made a name worldwide as an expert on nutrient management, received Purdue University’s 2011 Spirit of the Land Grant Mission Award on October 5 during a program held in his honor.

The award recognizes the accomplishments of a faculty member in the College of Agriculture, College of Health and Human Sciences or School of Veterinary Medicine whose work exemplifies the university’s land-grant mission of discovery, extension and learning.

Joern developed the Manure Management Planner, a computer program designed to help farmers optimize nutrient applications and minimize risks of nutrients reaching water sources. It is the only program used to generate nutrient management plans supported by the U.S. Department of Agriculture Natural Resources Conservation Service and the U.S. Environmental Protection Agency, and it is available for use in 36 states. ■



Three faculty members win CAREER Awards

This fall, three Purdue University faculty members received the National Science Foundation’s most prestigious honor for outstanding young researchers:

Prof. Monica Cardella in the School of Engineering Education is seeking to understand how engineering students’ learning experiences in requisite mathematics courses impact how they learn engineering design.



Prof. Senay Purzer in the School of Engineering Education is measuring the innovation skills of engineering students in order to design engineering degree programs that cultivate new capabilities and expertise among tomorrow’s engineering workforce.



Prof. Burkhard Schulz in the Department of Horticulture and Landscape Architecture is developing a research and educational program on the analysis of plant steroid activity in maize. ■



Thermoelectric expert is new director at Birck Nanotechnology Center

Ali Shakouri, a leading researcher advancing efforts in thermoelectric energy conversion at the University of California, Santa Cruz, is the new Mary Jo and Robert L. Kirk Director of the Birck Nanotechnology Center at Purdue University's Discovery Park.



"Professor Shakouri is an internationally recognized leader in his areas of specialization in the research field of nanotechnology," says **Alan Rebar**, executive director of Discovery Park and senior associate vice president for research at Purdue. "We are very pleased and excited to welcome him as the director of Birck."

Shakouri has focused his research on nanoscale heat and current transport in semiconductor devices, high-resolution thermal imaging, micro refrigerators on a chip and waste-heat recovery. He received his master's and doctoral degrees from the California Institute of Technology in 1995 and his bachelor's degree in engineering from Telecom ParisTech in France in 1990.

In addition to leading the Birck Nanotechnology Center, Shakouri is serving as a professor of electrical and computer engineering. ■

Writer: Phillip Fiorini is a senior writer/editor with Purdue Marketing and Media.

Professor scales down mass spectrometry

R. Graham Cooks envisions a day when everyone carries handheld devices — akin to Star Trek's tricorders — to instantly test foods for bacteria or pesticides. But his mini mass spectrometers might have remained the stuff of science fiction were it not for a fortuitous encounter with the 1960's leading expert in mass spectrometry.

Cooks, who also had a fondness for literature, was pursuing a Ph.D. in organic chemistry at the University of Natal, South Africa, when he met Stanford University researcher Carl Djerassi.

At the time, Djerassi was best known for his contributions to the development of the world's first birth control pill, but it was his use of mass spectrometry that had enabled many of his breakthroughs in organic chemistry. After Cooks explained his difficulties in analyzing a particular alkaloid, Djerassi offered to take a sample back to California to study with a mass spectrometer.



"My English literature career was coming closer and closer because I couldn't get any answers on this structure," says Cooks. But, he adds, "Two weeks later I received from Stanford the structure I'd spent two years working on, so mass spectrometry seemed a good thing to do."

After earning a second Ph.D. at Cambridge University, Cooks came to Purdue, where he has pursued his vision of bringing mass spectrometry to the masses. Instead of cumbersome 300-pound machines that require extensive sample preparation, his 10-pound Mini 11 device — which he developed with **Zheng Ouyang**, an assistant professor of biomedical engineering — uses techniques such as desorption electrospray ionization

(DESI) to rapidly analyze solid samples with minimal to no preparation by spraying fast-moving charged solvent droplets onto sample surfaces.

Last spring, the researchers took the device to some local supermarkets, where it successfully identified specific chemical residues on apples and oranges in a matter of minutes without the researchers having to peel or otherwise prepare a sample of the fruit. While the experiments were not a robust scientific examination, they did give Cooks and Ouyang some food for thought. As they perfect the technology, Cooks sees a not-so-distant future in which anyone from grocery store owners to grandparents could purchase the devices for their own use.

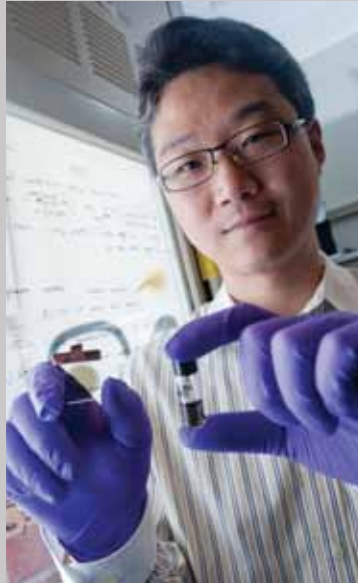
"It's perfectly logical that chemical instrumentation should become smaller and smaller and more capable," Cooks says. "Ultimately, we could make these consumer items." ■

Researcher looks to nature for synthetic ideas

Harnessing the power of the sun, photovoltaic cells are gaining in popularity as a green technology, but their high maintenance charges make them cost-prohibitive for many consumers. **Jong Hyun Choi** intends to bring prices down by getting the cells to mimic another green product — plants.

Using carbon nanotubes and DNA, Choi and his collaborators are creating a new type of solar cell designed to regenerate like natural photosynthetic systems.

“We’ve created artificial photosystems using optical nanomaterials to harvest solar energy that is converted to electrical power,” says Choi, an assistant professor of mechanical engineering at Purdue University.



The design exploits the unusual electrical properties of structures called single-wall carbon nanotubes, using them as “molecular wires in light harvesting cells,” says Choi, whose research group is based at the Birck Nanotechnology and Bindley Bioscience centers in Discovery Park.

“I think our approach offers promise for industry, but we’re still in the basic research stage,” he says.

A recent recruit to Purdue, Choi joined the School of Mechanical Engineering in January 2009 after postdoctoral work at University of Illinois at Urbana-Champaign and a stint at the Massachusetts Institute of Technology.

Choi’s research is highly multidisciplinary, encompassing nanotechnology, mechanical engineering, material science, and molecular biology and drawing upon the physical world for innovations.

“Our ideas for technological breakthroughs are often inspired by biological processes in nature,” Choi says.

“While we focus on fundamental nanoscience and nanoengineering, we aim to make transformative impacts in our society as well as scientific community.” ■

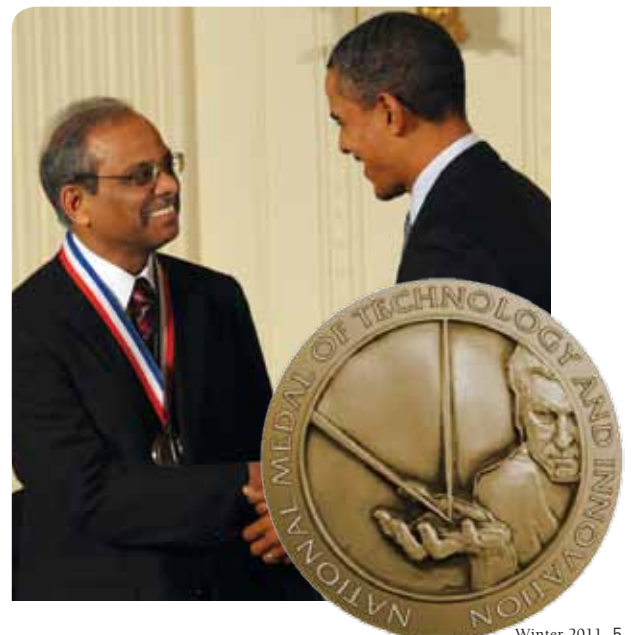
Professor receives top honors from White House

Rakesh Agrawal, a distinguished professor of chemical engineering, received the National Medal of Technology and Innovation in 2011. The award is the highest honor for technological achievement bestowed by the president of the United States.

Agrawal, the Winthrop E. Stone Distinguished Professor in the School of Chemical Engineering, holds 116 U.S. patents, nearly 500 non-U.S. patents and has authored 93 technical papers. His innovations have significantly impacted electronic device manufacturing, liquefied gas production and the supply of industrial gases for diverse industries.

Agrawal was honored with four other National Medal of Technology laureates during a White House ceremony.

“Each of these extraordinary scientists, engineers, and inventors is guided by a passion for innovation, a fearlessness even as they explore the very frontiers of human knowledge, and a desire to make the world a better place,” President Barack Obama said. “Their ingenuity inspires us all to reach higher and try harder, no matter how difficult the challenges we face.” ■





Purdue joins NSF collaboration on new digital environment

Purdue is teaming up with the National Science Foundation and 16 other institutions to create what is being called the most advanced, powerful and robust collection of integrated digital resources and services for research in the world.

Last July, NSF and its partners announced the new Extreme Science and Engineering Discovery Environment, which allows researchers open access to supercomputers, advanced computational tools, and other digital resources and services directly from their desktops.

“Purdue’s participation in the XSEDE project benefits research nationally, but it also benefits our faculty by helping build a more knowledgeable

research IT staff able to assist Purdue researchers more effectively,” says **John Campbell**, the associate vice president who leads researching computing for ITaP. “That’s true not only in using the array of resources and services available through XSEDE but also in using our considerable campus cyberinfrastructure.”

XSEDE replaces and will expand the NSF TeraGrid project that began a decade ago. More than 10,000 scientists used the TeraGrid to complete thousands of research projects at no cost to them.

The expanded partnership of XSEDE will encompass a broader set of resources — among them collections of data, networked instruments and new software tools — than those available through TeraGrid.

Purdue will lead a Campus Champions program to recruit, train and support local experts and advocates on campuses nationwide. The current Purdue TeraGrid campus champion, ITaP’s **Kim Dillman**, will continue in this role to support Purdue XSEDE users.

Purdue also will provide a liaison to the Open Science Grid (OSG) to assist campus champions and faculty, IT staff and students at their institutions in using the grid’s existing resources for research and education.

Purdue IT staff members also will provide support and consulting for campus champions and researchers using XSEDE, including integration of widely used community codes, tools and websites such as the Community Climate System Modeling (CCSM) portal that Purdue built for the TeraGrid.

Interested in taking advantage of XSEDE? Contact **Carol Song**, 765-496-7467, carolxsong@purdue.edu. ■

Writer: Greg Kline is a science and technology writer with Information Technology at Purdue (ITaP)



Bioinformatics Core debuts at Purdue

Imagine that you're trying to identify disease-resistant traits in a certain strain of soybeans, or examining the effects of various environmental toxins on the BRCA1 gene. While in the past you might have created your own program for analyzing the massive amounts of data created, now the Bioinformatics Core service center can assist you.

Launched in November, the service center, located on the 10th floor of Young Hall, provides collection, classification, storage and analysis of biochemical and biological information using computers. While it began in the College of Agriculture, the center has expanded to include support from at least four colleges, the Office of the Vice President for Research and several centers on campus. It's organizationally housed with ACCESS (Cyber Center).

"Most of the science is going towards generating really large data sets, and bioinformatics is a tool to make sense of it," says **Jyothi Thimmapuram**, director of the new Bioinformatics Core. Adds **Karen Plaut**, associate dean and director of research for the College of Agriculture and faculty director of the Bioinformatics Core, "The service center is for faculty to be able to use modern techniques to analyze their data, particularly across the omics — genomics, ionomics, proteomics, metabolomics."

Thimmapuram comes to her new position by way of the University of Illinois, Urbana-Champaign, where as director of the Bioinformatics Unit, she led a team in transcriptome and genome sequence analysis and microarray data analysis using various tools. She also provided general consultation.

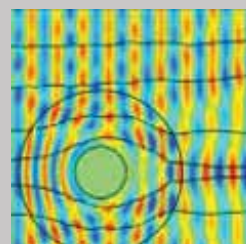
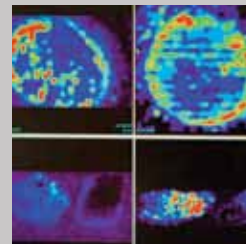
In her new position at Purdue, she will provide similar services aligned to the needs of Purdue researchers. "I want them to have no limitations in analyzing biological data," she says. "My goal is to help researchers and their collaborators understand how to do the analysis of the data and how to interpret the results."

Typically, Thimmapuram says, bioinformatics consultants are most helpful when they work alongside principal investigators from the time they begin designing an investigation, so that they can plan experiments with an eye toward generating the right type of data. For grants specifically requiring bioinformatics expertise, Thimmapuram can write letters of support.

A comprehensive website and series of workshops are being planned to educate researchers on the specific services the Bioinformatics Core can provide. In the meantime, to request services, simply contact Thimmapuram at jyothit@purdue.edu. ■



➤➤ A Day in Celebration of Excellence in Research





Please visit the Office of the Vice President for Research website for a complete list of the awardees, project titles, sponsors and funding at www.purdue.edu/research/vpr/publications/excellence.php or scan the QR code below to view with your mobile device.



Smithsonian awards fellowship to PhD student

Ph.D. student **Yini Ma** has been awarded a fellowship by the Committee on Institutional Cooperation and the Smithsonian Institution.

Ma was one of five students nationwide chosen in the inaugural year of the fellowship, designed for doctoral students representing fields of study that are actively pursued by the museums and research organizations of the Smithsonian Institution. Fellowships carry a stipend of \$30,000.



Ma will spend the next year in the Baltimore, Md., area working with collaborators at Johns Hopkins University and the Smithsonian Environmental Research Center on experiments to measure gas flux from forest soils undergoing disturbance by the invasive species. ■

Post-doc receives award to study retinal degeneration

Liyun Zhang, a postdoctoral researcher in biological sciences, has been selected as the

International Retinal Research Foundation's Charles D. Kelman, M.D. Scholar for her work in studying the gene networks that control retinal degeneration.



As part of the award, Zhang received a one-year \$35,000 grant for her project "Disease-causing gene network in the retina and RPE of zebrafish retinal degeneration mutants."

Zhang works in the laboratory of Yuk Fai Leung, an assistant professor of biological sciences. ■

NSF grant will shine light on ancient copper artifacts, innovation in Alaska

A Purdue University archaeologist will study ancient copper innovation in far northwest North America and will help Alaska native youth in the Copper River Basin learn how their ancestors made and used copper tools.

"Though scholars have discussed the use and importance of native copper in different areas of northwest North America, there are still many questions regarding how this technology developed and how and why it moved between different communities in the past," says **H. Kory Cooper**, an assistant professor of anthropology. His project is supported by a \$512,950 grant from the Arctic Social Sciences Division of the National Science Foundation. ■



NIH funds longevity study

Can we really worry ourselves to death? It's not quite as simple as that, but Prof. **Daniel Mroczek** says that a correlation exists between high levels of neuroticism—the tendency to experience excessive worry, anxiety and other negative emotions—and shortened life span. Now, he wants to see exactly how those negative emotions turn against us.

Mroczek, a professor of human development and family studies who received a \$2.1 million grant from the National Institutes of Health to further his research, surmises that people ranking high on neuroses scales likely have poorly regulated hypothalamus-pituitary-adrenal axes along with elevated cortisol and inflammatory marker levels—all of which are associated with disease.

Now, he's studying older adults to see how these measurements correlate with wellbeing and personality. Ultimately, he hopes that health professionals can use personality testing to target people most likely to benefit from therapies such as meditation, exercise or psychotropics. "Identification of those who are predispositionally at higher risk for certain risk factors is a hallmark of the new area of individualized medicine," he says. ■



Applicability of Export Control Laws to Confidential Data

Research projects conducted at Purdue are generally intended to be published or broadly shared within the scientific community. However, certain endeavors may restrict distribution of results or require approval by a corporate or government sponsor prior to publication.

If your research team receives or generates data considered to be confidential or proprietary in nature, export control laws will apply to your research. As you may know, transfer of confidential information can be subject to specific safeguarding measures or completely restricted from being shared with certain entities.

Furthermore, if a Purdue investigator receives information with restrictive labeling referencing Export Administration Regulations, International Traffic in Arms Regulations or any other security markings, he or she must contact the Office of Research Integrity and Regulatory Affairs as soon as possible. Staff members will assist the investigator in safeguarding information properly through a Technology Control Plan (TCP) or other means necessary to satisfy the requirements of the applicable export control regulations.

If at any time you have questions about applicability of export control laws to information shared with your research team, please see the section of the OVPR website dedicated to export control issues: <http://www.purdue.edu/research/vpr/rschadmin/rschoversight/export/index.php>. ■

Writer: Ianthe Bryant-Gawthrop is director of research regulatory compliance for sponsored programs in the Office of the Vice President for Research.

Research development transitions

Christine King, director of Research Development Services, is retiring in January. Sue Grimes and Sally Bond each will take on oversight of specific areas, as identified below:

Sally Bond, Lead Proposal Coordinator: sbond@purdue.edu

- » Assignment of requests from faculty for proposal assistance (grant writing) to each of the five proposal coordinators;
- » Overall responsibility for the proposal coordinator group;
- » Work with units, as needed, to communicate grantsmanship strategies.



Sue Grimes, Assistant Director of Research Development Services: sgrimes@purdue.edu

- » Coordination of sponsor pre-award site visits;
- » Limited submission competitions;
- » Funding resources: grantsmanship-related events, Community of Science/Pivot, weekly funding e-mails, faculty funding queries;
- » Research Development and Funding areas of OVPR website;
- » Work with units, as needed, to communicate Research Development resources. ■



Technology professor receives outstanding commercialization award

Lonnie Bentley, a professor of computer and information technology in the College of Technology, has received the 2011-2012 Outstanding Commercialization Award for Purdue University Faculty.

The award is given annually to a faculty member for outstanding contributions to, and success with, commercializing Purdue research discoveries. It was established with an endowment gift from the Central Indiana Corporate Partnership Foundation.



Bentley is co-founder, board member and vice president of business development for Broadband Antenna Tracking Systems Inc. (BATS). It is an Indiana company that provides automatic antenna aiming and tracking technology that Bentley co-developed at Purdue with **Anthony Smith** and **Michael Kane**, both in computer and information technology.

Bentley has been a professor in the Department of Computer and Information Technology since 1981. From 2002-2010, he served as head of the department, which grew from \$100,000 per year in total research funding to more than \$7.2 million. The department became the first ABET (Accreditation Board for Engineering and Technology) accredited information technology program in the United States and was recognized as having the nation's top network engineering technology program.

"Professor Bentley is a leader in developing and bringing to market a technology that helps us enjoy the many benefits of broadband communications," says **Suresh Garimella**, Purdue's associate vice president for engagement. "He and his team did the research, saw the potential for commercialization and found a way to bring it to market. That is what this award is about." ■

Writer: Judith Barra Austin is a communications/marketing specialist with Purdue Marketing and Media.

Study: Purdue Research Park Contributes \$1.3 Billion to Indiana Annually

When it was established 50 years ago, the Purdue Research Park was the country's third university technology park. Today, as the largest largest university-affiliated incubation complex in the United States, the Purdue Research Park network provides an annual economic impact of \$1.3 billion to Indiana's economy, according to an independent research study.

Compiled by Thomas P. Miller and Associates, the report also states that the network has invested more than \$584 million in infrastructure, provides \$48 million in annual tax revenue for the state, and houses companies whose employees earn an average annual wage of \$63,000 — 65 percent higher than the Indiana average.

"Purdue Research Park set the gold standard for how universities can support economic development through business incubation and expediting new discoveries through the technology transfer process," says Mitch Roob, Indiana Secretary of Commerce and CEO of the Indiana Economic Development Corporation.

"The companies in the park network are doing work in nearly every sector, including engineering, life sciences, information technology, agriscience, security and advanced manufacturing," adds **Joseph Hornett**, senior vice president, treasurer and COO of the Purdue Research Foundation, which manages the park network. "While it is important to recognize the economic contributions to the state, it is just as important to celebrate the international contributions the park and park-based companies have had on helping people by addressing global challenges such as health care, energy, terrorism and hunger." ■

Writer: Cynthia Sequin is a communications/marketing specialist for Purdue Research Foundation.



»» Sponsored Program Year-to-Date Activity

Awards by Sponsor

July 1, 2011 to September 30, 2011

SPONSOR	FY2012 (YTD 9/30/2011)		FY2011 (YTD 9/30/2010)		% Change	
	NO.	\$ AMOUNT	NO.	\$ AMOUNT	NO.	\$ AMOUNT
National Science Foundation	138	41,092,509	142	52,082,080	-3%	-21%
Dept. of Health and Human Services	106	16,867,152	102	28,071,924	4%	-40%
Dept. of Defense	64	8,837,273	84	9,400,699	-24%	-6%
Dept. of Energy	41	4,283,662	44	9,755,155	-7%	-56%
Dept. of Agriculture	57	9,527,023	41	12,432,087	39%	-23%
National Aeronautics and Space Administration	28	2,898,784	24	2,574,154	17%	13%
Other Federal	32	3,168,684	50	5,309,548	-36%	-40%
Dept. of Education	15	3,218,291	13	7,052,029	15%	-54%
Environmental Protection Agency	9	539,716	9	363,067	0%	49%
Dept. of Transportation	13	456,580	7	217,689	86%	110%
Agency for International Development	2	70,313	7	1,515,320	-71%	-95%
Total Federal	505	\$90,959,986	523	\$128,773,752	-3%	-29%
Industrials and Foundations	400	15,803,422	418	16,648,853	-4%	-5%
State/Local Governments	46	2,628,541	52	5,066,573	-12%	-48%
Purdue Research Foundation/Purdue University	262	3,812,166	363	6,224,637	-28%	-39%
Foreign Governments	5	609,104	5	6,107,342	0%	-90%
Total Non-Federal	713	\$22,853,234	838	\$34,047,405	-15%	-33%
Total Purdue System-wide	1,218	\$113,813,220	1,361	\$162,821,157	-11%	-30%

Data provided by Sponsored Program Services

A comprehensive monthly awards list, including search and sort capabilities, is available online. Please visit the OVPR website at www.purdue.edu/research/vpr/ or scan the QR code at right to view on your mobile device.



NOVEMBER

Discovery Lecture Series: Addressing National Security Challenges of the Twenty-First Century: The Role of the U.S. National Laboratories

- » **When** November 30, 9-10:30 a.m.
- » **Where** Krannert Auditorium
- » **Contact** Cindy Ream, cream@purdue.edu, 765-494-0015



Paul Hommert is president and laboratories director of Sandia National Laboratories and president of Sandia Corporation, which operates Sandia for the U.S. Department of Energy's National Nuclear Security Administration.

Sponsors: Discovery Lecture Series and Lilly Endowment Inc.

JANUARY

Organizing a Site Visit

- » **When** January 18, 2012, 11:30 a.m.-1 p.m.
- » **Where** Stewart Center, Room 322
- » **Contact** Christine King, hcking@purdue.edu

This workshop is targeted to administrators and faculty whose responsibilities may include pre-award or post-award organization of the issues and details associated with a sponsor site visit. Topics will include putting together a mock review, on- and off-campus logistics, and presentations.

Lunch is provided so registration is required and will be available approximately one month prior to the event at www.purdue.edu/research/vpr/rschdev/calender_grantsmanship_events.php.



FEBRUARY

How to Use NIH Data for Your Strategic Advantage

- » **When** February 16, 2012, 11:30 a.m.-1 p.m.
- » **Where** Stewart Center, Room 202
- » **Contact** Perry Kirkham, pkirkham@purdue.edu

This session focuses on how analyzing NIH data of success rates, total dollars spent, and applications received by an agency can help increase your chances for success with a proposal.

Lunch is provided so registration is required and will be available approximately one month prior to the event at www.purdue.edu/research/vpr/rschdev/calender_grantsmanship_events.php.

MARCH

Purdue Lectures in Ethics, Policy and Science: Ethics, Policy and Medicine

- » **When** March 6, 2012, 4-5:15 p.m.
- » **Where** Burton D. Morgan Center for Entrepreneurship, Room 121
- » **Contact** bioethics@purdue.edu

Arthur Caplan, Emanuel and Robert Hart Professor of Bioethics, University of Pennsylvania Center for Bioethics, will discuss "Personalized Medicine vs. Spitiomics — The Uncertain Future of Genetic Testing."

Purdue Lectures in Ethics, Policy and Science: Implications of Synthetic Biology

- » **When** March 28, 2012, 5:30-7 p.m.
- » **Where** Pfendler Hall of Agriculture, Room 241
- » **Contact** bioethics@purdue.edu

Gregory Kaebnick, research scholar, director of the Editorial Department, and editor of the Hastings Center Report and Bioethics Forum at the Hasting Center, will discuss "Synthetic Life: A New Industrial Revolution?"

APRIL

Purdue Lectures in Ethics, Policy and Science: The U.S. EPA and Climate Change Ethics

- » **When** April 12, 2012, 5:30-7 p.m.
- » **Where** Pfendler Hall of Agriculture, Room 241
- » **Contact** bioethics@purdue.edu

Lisa Heinzerling, professor of law, Georgetown University and outgoing assistant administrator, Office of Policy, Economics, and Innovation at the U.S. EPA, will discuss "Climate Change at EPA."

Purdue Lectures in Ethics, Policy, and Science: Global Public Health

- » **When** April 13, 2012, 5:30-7 p.m.
- » **Where** Lawson Computer Science Building, Room 1142
- » **Contact** bioethics@purdue.edu

Maria Merritt, assistant professor, Johns Hopkins Berman Institute of Bioethics, will discuss "Global Public Health Research: Questions about Researchers' Responsibilities to Benefit Participants."

Purdue Lectures in Ethics, Policy, and Science: Ethics and the Practice of Science

- » **When** April 18, 2012, 5:30-7 p.m.
- » **Where** Pfendler Hall of Agriculture, Room 241
- » **Contact** bioethics@purdue.edu

Frederick Grinnell, professor of cell biology in Integrative Biology and the Ethics in Science and Medicine Program at UT Southwestern, will discuss "Informed Consent and Risk: The Intersection Between Human Research and Genetics."

JUNE

IUTAM Summer School on Biomechanics of Tissue and Tissue-Cell Interaction

- » **When** June 5-8, 2012
- » **Where** Purdue University
- » **Contact** Prof. Thomas Siegmund,
765-494-9766,
siegmund@purdue.edu

The goal of the summer school is to introduce participants to the state-of-the-art tissue in the biomechanics of bone, ligament, tendon and soft tissue, to interactions between mechanical loading and cellular response, and to the mechanics of interaction between extracellular matrices and cells, to the micro and nano-scale deformation and failure processes of skeletal tissues, as well as to relevant biomedical image modalities.

8th International Purdue Symposium on Statistics: Diversity in the Statistical Sciences for the 21st Century

- » **When** June 20-24, 2012
- » **Where** Stewart Center
- » **Website** www.stat.purdue.edu

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