Welcome

“Man’s mind, once stretched by a new idea, never regains its original dimensions.” — Oliver Wendell Holmes

For the 140 students from around the country who participated in the Summer Undergraduate Research Fellowships at Purdue this year, stretching their minds brought them new insights. And so it is with enterprising young researchers and veteran faculty members as well. Whether tackling hunger or poverty, disasters or sustainability, Purdue researchers are finding answers through new perspectives and contexts. In this issue, read about their new collaborations, discoveries and achievements made possible by continually pushing the boundaries of their minds.

Each May, young investigators from around the country engage in lab work and field studies at Purdue through the Summer Undergraduate Research Fellowship program. After 11 weeks of paid, hands-on research, fellows showcase their findings in a symposium (pictured above), giving oral presentations and poster sessions on everything from aphid infestation to lead-exposed zebrafish.

Dawei Wang, a computer science major from Purdue, says his study of Nanohub users this summer helped to cement his interest in pursuing a Ph.D. in industrial engineering. Stephanie Hathaway, an entomology major at Purdue who spent her summer in soybean fields studying predator insects, discovered that she prefers education and classification over field research. “I really enjoy identifying insects and telling people about them, and I’m thinking I’ll either pursue insect identification or extension and outreach,” she says.

While undergraduates gain some exposure to scientific research during the academic year, the intensity of a summer fellowship without the distraction of part-time jobs and coursework allows students to really picture themselves as scientists. “This is good that they have a whole summer to focus and really immerse themselves,” says Kate Hess, a Ph.D. student in mathematics who assisted with the SURF program this summer.
Biochemistry Professor Receives McCoy Award

Clint Chapple, department head and Distinguished Professor of Biochemistry, is the 2011 recipient of the Herbert Newby McCoy Award, the most prestigious research honor given by Purdue. Chapple is being recognized for his pioneering efforts in the mapping of plant cell walls to make them better suited for forage, fiber and fuel.

“Professor Chapple is a trailblazer in the mapping of metabolic pathways that drive plant biomass production,” says Richard Buckius, vice president for research. “He has helped to transform agriculture and bioenergy production while also making seminal contributions to fundamental scientific knowledge in these fields.”

Chapple, who joined the Purdue faculty in 1993, focuses on understanding and manipulating a compound in cell walls called lignin, which, while contributing to a plant’s structural strength, also hinders conversion of plants into other materials. Chapple studies ways to preserve the beneficial functions of lignin, while altering properties that impede the commercialization of plant products. His lignin research has led to improved processing techniques for producing pulp for paper. Chapple currently is studying ways to alter lignin so that cellulose from plants such as poplar trees can be used for ethanol production in the biofuels industry.

The McCoy Award, established in 1964 by Ethel Terry McCoy in memory of her husband, is presented annually to a Purdue student or faculty member for outstanding contributions to science. The winner is nominated by colleagues and selected by faculty representatives and the University president.

Chapple will be formally recognized by the University on Nov. 1 at the McCoy Distinguished Lecture. He will give a presentation on his research accomplishments during the event.
Showalter Award Winners Announced

Pancreatic cancer, drug addiction and nanotechnology are some of the research topics being investigated by Purdue’s 2011 Showalter Award recipients.

Since 1975, Purdue researchers have benefited from grants through the Ralph W. and Grace M. Showalter Research Trust Fund. Eligible areas of research, as described by the benefactors, are air and water pollution, biochemistry, disease control and prevention, new technologies in food production, and medical and biophysical instrumentation.

This year’s honorees are:

David Colby, medicinal chemistry & molecular pharmacology, “Fluorinated Molecules for the Treatment of Drug Addiction,” $75,000,

Bennett Elzey, comparative pathobiology, “A Synthetic Lethal Interaction between Plk1 and PTEN in Prostate Cancer,” $75,000,

Kee-Hong Kim, food science, “Role of Glycated Dietary Proteins in Lipid Dysfunction of Adipose Tissue and Muscle in Aging,” $75,000,

Xiaoqi Liu, biochemistry, “Plk1 in Gemcitabine Resistance of Pancreatic Cancer,” $75,000,

Teimour Maleki, Birck Nanotechnology, Discovery Park, “Photo-Electrochemical Oxygenation of Retinal Ischemic Tissue through Targeted Metallic Nanowire Delivery to the Hypoxic Cell,” $66,000,

M. Fernanda San Martin-Gonzalez, food science, “Bacteriophage Coatings of Seeds for Increased Food Safety,” $60,761,

Corey Neu, biomedical engineering, “Magnetic Resonance Instrumentation for Single Cell Microscopy and Spectroscopy,” $75,000,

Kinam Park, Distinguished Showalter Professor, biomedical engineering, “Drug-eluding Balloon for Cardiovascular Diseases,” $60,000,

Yulia Pushkar, physics, “Analysis of Molecular Mechanisms of Adult Neurogenesis and Brain Repair by Synchrotron Based Biomedical X-ray Imaging and Spectroscopy,” $66,000, and

Chongli Yuan, chemical engineering, “Effects of Chromosome Structure on Gene Transcription Activity,” $75,000.

Purdue Professors Elected to American Academy of Arts and Sciences

Three Purdue University professors have been elected members of the American Academy of Arts and Sciences, one of the nation’s oldest and most prestigious honorary societies.

Leah H. Jamieson, the John A. Edwardson Dean of Engineering and Ransburg Distinguished Professor of Electrical and Computer Engineering; H. Jay Melosh, Distinguished Professor of Earth and Atmospheric Sciences and Physics; and Ei-ichi Negishi, the Herbert C. Brown Distinguished Professor of Chemistry, will be inducted into the 2011 class at a ceremony on Oct. 1 at the academy’s headquarters in Cambridge, Mass.

“The academy celebrates leaders in their fields and this year has selected Purdue professors that include a Nobel laureate, a planetary science expert who has participated in NASA missions and a pioneer in engineering education,” says Purdue President France A. Córdova, who was elected as an academy member in 2008. “We are proud that professors Jamieson, Melosh and Negishi have been recognized for their extraordinary contributions. I am confident that they will enhance the academy’s mission to create practical policy to address today’s challenges.”

Other Purdue members of the academy are Arden Bement, director of Purdue’s Global Policy Research Institute; R. Graham Cooks, the Henry Bohn Hass Distinguished Professor of Chemistry; Joseph Francisco, the William E. Moore Distinguished Professor of Earth and Atmospheric Sciences and Chemistry; Albert Overhauser, the Stuart Distinguished Professor of Physics; Michael Rossmann, the Hanley Distinguished Professor of Biological Sciences; and Freydoon Shahidi, Distinguished Professor of Mathematics.

Writer: Elizabeth Gardner is communications and marketing specialist for Purdue Marketing and Media.
Researchers receive Early CAREER Awards from National Science Foundation

Seven Purdue University faculty members have received the National Science Foundation’s most prestigious honor for outstanding young researchers.

Xinyan Deng, Luis Kruczenski, Vijay Raghunathan, Sanjay Rao, Lyudmila Slipchenko, Olga Vitek and Yoon Yeo each have received Faculty Early Career Development awards ranging from $300,000 to $525,000 in research funding over four or five years. Details about their research follow:

**Deng**, an assistant professor of mechanical engineering, is studying the flight trajectory feasibility and stability observed in insects and birds in order to design and fabricate flapping wing micro-aerial vehicles capable of stable and maneuverable flight with biomimetic sensors.

**Kruczenski**, an assistant professor of physics, is studying the duality of string and gauge theories to contribute to a more complete understanding of what happens inside the atoms that make up matter.

**Raghunathan**, an assistant professor of electrical and computer engineering, is developing software and hardware for reliable operation of wireless “embedded” systems, which are used in applications such as miniature remote military sensors and microprocessors in cars and appliances.

**Rao**, an assistant professor of electrical and computer engineering, is developing more intuitive ways to express network policies and automated approaches to embed and validate these configurations.

**Slipchenko**, an assistant professor of chemistry, will develop and refine computational techniques that combine quantum mechanics and molecular mechanics to more accurately model the complex proteins involved in photosynthesis.

**Vitek**, an associate professor in computer science with a joint appointment in the Department of Statistics, is supporting the development of statistical and computational tools for functional proteomics, metabolomics and ionomics, with the goal of increasing the sensitivity, accuracy and scope of the investigations.

**Yeo**, an assistant professor of biomedical engineering, is studying mucus materials with abnormal rheological properties that significantly interfere with effective transport of nanoparticles in order to develop a new drug delivery strategy utilizing osmotic agents to overcome the mucus barrier.

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**Appointments, Awards**

**Arden L. Bement Jr.**, director of Purdue University’s Global Policy Research Institute, chief global affairs officer for Purdue University and David A. Ross Distinguished Professor of Nuclear Engineering, has been recognized by the country of France as an officer of the French Legion of Honor. Bement received the “Chevalier dans l’Ordre National de la Légion d’Honneur” last spring at the residence of the Ambassador of France in Washington, D.C. The award, created by Napoleon Bonaparte in 1802, is France’s most prestigious distinction and recognizes military, cultural, scientific or social contributions to France.

**Andrew DeWoody**, a professor in the Department of Forestry & Natural Resources, is the winner of the 2011 Purdue Agricultural Research Award for his work at the interface of genetics and ecology. Given each year to a faculty member in the College of Agriculture with less than 15 years of experience beyond a doctoral degree, the award is for scientists who have demonstrated a high level of excellence in research and made significant contributions to agriculture, natural resources and quality of life for Indiana citizens.

**Gebisa Ejeta**, Distinguished Professor of Agronomy and World Food Prize laureate, has been named to the Board for International Food and Agricultural Development, which advises the U.S. Agency for International Development on agricultural development priorities and on U.S. universities’ involvement in Title XII (Famine Prevention and Freedom from Hunger) issues worldwide.

**Jules Janick**, James Troop Distinguished Professor of Horticulture, has received the Lifetime Achievement Award from the National Association of Plant Breeders. He was chosen for exceptional accomplishments in research, teaching and collaboration. Janick, who has been at Purdue since 1951, is director of the Indiana Center for New Crops and Plant Products. He has helped develop around 20 varieties of scab-resistant apple cultivars, including Gold Rush, Pixie Crunch and Crimson Crisp.
Purdue University has been selected to develop a planning guide for regional centers being created to provide critical services during catastrophes such as natural disasters or terrorist attacks in Chicago and surrounding counties in Illinois, Indiana and Wisconsin.

The Purdue Homeland Security Institute at Discovery Park has been awarded $1.5 million for the work. It is part of a project funded by a grant of up to $6 million from the U.S. Department of Homeland Security’s Regional Catastrophic Preparedness Grant Program.

The Chicago Office of Emergency Management and Communications selected teams from Purdue and the University of Illinois at Chicago. Purdue will create a planning guide for Regional Hub Reception Centers that will serve the Illinois-Indiana-Wisconsin Combined Statistical Area, which encompasses 10 Illinois counties, the City of Chicago, five Indiana counties and one Wisconsin county.

“We are making sure that plans are in place in each county and that those plans work seamlessly with one another for the public good,” says J. Eric Dietz, director of the Purdue Homeland Security Institute.

The centers will be activated to care for and shelter large influxes of people injured and displaced by a catastrophic event. “The plans will be very health-care focused,” Dietz says. “The project will involve logistics, administration, command and control, everything.”

The centers will provide essential support services, including intake and registration of victims and displaced residents, decontamination, first aid and medical screening, temporary shelter, communications, and care for pets. “We will facilitate putting this plan together, conduct data mining with counties and identify their unique needs,” says Cliff Wojtalewicz, managing director of the institute.

“Then we will begin customizing these plans while incorporating their guidance. After one year the first phase will be completed, and there might be subsequent years with follow-on preparedness plans. This project also provides an excellent opportunity for our students to interact with government and industry in the Chicago area, working on issues that require interdisciplinary solutions, which is exactly what Discovery Park is all about.”

Writer: Emil Venere is a writer/editor with Purdue Marketing and Media.
Cost Share Policies Revisited

Last spring, the Office of the Vice President for Research (OVPR) with the assistance of all the colleges and Sponsored Program Services, reviewed how cost share is requested, allocated and tracked in order to look for improved efficiencies in the process. The review has resulted in a revised process document, available at [www.purdue.edu/research/vpr/policies/costsharing.php](http://www.purdue.edu/research/vpr/policies/costsharing.php), which further clarifies how OVPR resources will be distributed.

Highlights of this document include:

- An online request form available to principal investigators seeking cost share support for research projects,
- Clear guidelines on how requests for this type of institutional support are prioritized, and
- A single point of contact for all institutional-level cost share requests.

Principal investigators will still need to contact their department heads and assistant deans for research with requests of cost share resources at those levels. If the request is related to a non-research project, OVPR staff will assist the principal investigator in finding the appropriate office and point of contact.

As Mary Millsaps, OVPR operations manager, explains, “Many federal and non-profit sponsors of research require universities to bear some of the financial burden of the research they support. As Purdue’s research portfolio continues to grow, the need for this type of institutional support for research also has increased.”

In fact, she says, between fiscal year 2008-09 and 2010-11, when expenditures on sponsor dollars increased 11%, expenditures on cost share dollars increased 15%.

“In order to continue to increase Purdue’s research base, it is essential that principal investigators have cost share resources and information available to them quickly and efficiently,” she adds. “Our goal in the OVPR is to support the efforts of Purdue researchers by providing clear guidance and proactive support.”

Responsible Conduct of Research Training Reminder

The National Science Foundation (NSF) requires that grantee institutions implement a plan for appropriate training and oversight in the responsible and ethical conduct of research (RCR). Principal investigators with applicable NSF awards are being reminded of this requirement. Purdue’s RCR education plan for NSF-sponsored trainees consists of:

- Completion of an online training within the first month of support for graduate students and postdoctoral researchers, and as a condition of hire for undergraduates.
- Completion of discussion-based RCR education for graduate students or postdoctoral researchers. Requirements and documentation are established and maintained by a student’s graduate program or by a postdoctoral researcher’s mentor and are to be completed within the first year of support.

Please visit [www.purdue.edu/research/vpr/rschadmin/rcr/index.php](http://www.purdue.edu/research/vpr/rschadmin/rcr/index.php) for details, or contact the Office of Research Integrity and Regulatory Affairs within the Office of the Vice President for Research.

Contact a Pre-Award Center for Proposal Development Support

Sponsored Program Services Pre-award teams are available to assist principal investigators (PIs) in proposal development. Remember to contact your pre-award center early in the process for assistance in developing proposals:

- College of Agriculture: agpreaward@purdue.edu
- College of Education: centralpreaward@purdue.edu
- College of Engineering: coepreaward@preaward.edu
- College of Health and Human Sciences: chhspreaward@purdue.edu
- College of Liberal Arts: centralpreaward@purdue.edu
- College of Pharmacy: coppreaward@purdue.edu
- College of Science: cospreaward@purdue.edu
- College of Technology: centralpreaward@purdue.edu
- Discovery Park: spsdpark@purdue.edu
- Krannert School of Management: centralpreaward@purdue.edu
- School of Veterinary Medicine: vtpreaward@purdue.edu

In your email, please include the PI name, department, sponsor, deadline and reference to sponsor guidelines when available. After the pre-award team receives this information, a pre-award specialist will contact you to begin work on your proposal.

For more information, contact Amanda Hamaker, assistant director of sponsored program services, 494-9642 or ahamaker@purdue.edu.
New Web-based tool for Disclosure of Individual Financial Conflicts Related to Sponsored Projects

The recently updated University policy on Individual Financial Conflicts of Interest (X.2.3) requires that investigators participating in sponsored projects disclose any significant financial interests that may present an actual or potential conflict of interest in relationship to externally sponsored projects.

All investigators (i.e., persons responsible for the design, conduct and/or reporting of research findings) must complete and sign a simple Financial Interest Statement within one week of transmittal of any proposal to Sponsored Program Services (SPS) for submission to an external sponsor. To facilitate this process for investigators, the Office of the Vice President for Research has developed a Web-based application to collect the Financial Interest Statement (FIS) and related disclosures.

Investigators on research proposals will be notified by SPS via email that they need to fill out their FIS using the online, Web-based application. Investigators will use their Purdue career account login and password to access their online forms. This new Web-based FIS tool can be accessed by investigators remotely using a computer with Internet connection or by smartphone, iPad, or PDA with Internet access.

Any investigator who indicates in an FIS the existence of a "significant financial interest" related to proposed research or instructional activities must complete and sign the Research Related Significant Financial Interest Disclosure Form and submit the signed form to the "university responsible official" in the Office of the Vice President for Research within 30 days of submission of the proposal to an external sponsor. Disclosures of research related significant financial interest should be submitted to Peter E. Dunn, associate vice president for research, Office of Research Integrity and Regulatory Affairs, Hovde Hall, Room 335.

The Office of Research Integrity and Regulatory Affairs will contact individuals who disclose significant financial interests to gather additional information necessary to assess potential conflicts of interest and draft a conflict of interest management plan, when necessary.

More information regarding this process can be found at Disclosure of Significant Financial Interests for Investigators Submitting Proposals to External Sponsors on the OVPR website at www.purdue.edu/research/vpr/reschadmin/coi/index.php.

New to the Research Development’s website (www.purdue.edu/research/vpr/rschdev) has been updated and reorganized to make information on grantsmanship easier to find. The content is categorized by Services and Resources. Information on limited submission opportunities and proposal coordination (grant writing) assistance can be found under Services. Those new to Purdue may wish to read the Limited Submission Proposal and Review Process document, which can be downloaded from the limited submission webpage.

New to the Research Development website are a list of campus-wide grantsmanship events and, under Proposal Preparation Resources, a list of funding opportunities for early career faculty and post doctorates as well as an updated list of websites, books and organizations that all deal with grantmanship.

If you are hosting a grantsmanship event or know of a funding opportunity or resource that might be considered for inclusion on the website, please contact Maria Drake (mldrake@purdue.edu).

Research Development Updates Website

Writer: Sue Grimes is assistant director of Research Development Services.

Writer: Voichita Dadarlat is assistant vice president for research compliance.
Global Challenge Initiatives

Global Policy Research Institute Issues Grants

Disaster recovery, diabetes management, cancer prevention and sustainability are some of the research topics that Purdue’s Global Policy Research Institute (GPRI) is supporting through the organization’s first series of awarded grants.

Professors who received $30,000 research grants are:

» Daniel P. Aldrich, assistant professor of political science, “Network Resilience in Disasters: An Interdisciplinary, International Perspective”

» Sophie A. Lelièvre, associate professor of basic medical sciences in the School of Veterinary Medicine, “Public Health Policies for Breast Cancer Prevention Research: A Global Venture”

» Sonak Pastakia, assistant professor of pharmacy practice, “Bridging Income Generation with Provision of Incentives for Care”

» Paul V. Preckel, professor of agricultural economics and faculty director of Indiana’s State Utility Forecasting Group, “Increasing Electricity Trading and Environmental Sustainability in Southeast Europe”

» Leigh S. Raymond, associate professor of political science and associate director of Purdue Climate Change Research Center, “All (Climate) Politics are Local? Exploring the Relationship Between Framing of Scientific Projections of Local Climate Change Impacts and Sub-National Policy Design”

Professors who received $10,000 workshop/symposia grants are:

» Matthew Huber, associate professor of earth and atmospheric sciences, “Bridges to Sustainability: Research Workshops with the Australian and New Zealand Institutions”

» James M. Lowenberg-Deboer, associate dean of international programs in agriculture and professor of agricultural economics, “Joint Purdue–Brazil Symposium on Bio-energy: Spring 2011”


Four Purdue research teams also have each received $30,000 grants from GPRI in partnership with the university’s Center for Global Food Security. The incentive grants were awarded to:

» Thomas W. Hertel, distinguished professor of agriculture, for an international workshop on the global spatial database infrastructure;

» Klein Ileleji, associate professor of agricultural and biological engineering, to address problems associated with postharvest losses and mycotoxins for maize, a major staple food crop in sub-Saharan Africa;

» Betty Bugusu, managing director of International Food Technology Center, to identify and develop a value chain that enhances food security and promotes economic growth in the region for east Africa.

» Abdelfattah M. Nour, professor of basic medical sciences in the School of Veterinary Medicine, to improve animal health and productivity for poor African families.

Details about the current solicitation can be found at www.purdue.edu/research/vpr/rschdev/seedgrants.php.

New Purdue Center to Focus on Poverty, Health Inequities

A new center at Purdue University will focus on research and outreach projects that seek to reduce health disparities in Indiana, United States and around the world.

The Center on Poverty and Health Inequities, which is affiliated with the College of Liberal Arts, will be part of the Regenstrief Center for Healthcare Engineering at Discovery Park. In collaboration with the Indiana State Department of Health, Indiana Minority Health Coalition, Northwest Indiana Health Disparities Initiative and other community groups, the center will develop community-based partnerships in addressing them.

“One of our first projects is aimed at reducing the incidence of heart disease in the high-risk African-American population, and we are collaborating with communities and health-care groups in Gary and Indianapolis to develop culturally-centered health information capacities driven by comparative effectiveness research,” says Mohan J. Dutta, director of the center, professor of communication, and associate dean for research and graduate education in the College of Liberal Arts.

The center also will focus on examining health-care delivery processes, the development of prevention services, the development of community-academic partnerships in addressing health-care disparities and enhancing access to quality health resources among underserved communities and populations.

Contact Mary Schultz at 494-9828 or schultm@purdue.edu for more information.

Writer: Amy Patterson Neubert is a communications/marketing specialist for Purdue Marketing and Media.
Catalyzing Social Impact: Research Synergy Clusters in Liberal Arts

As part of its “Catalyzing Social Impact” positioning strategy the College of Liberal Arts has created nine Research Synergy Clusters to address global grand challenges.

The clusters offer opportunities for engaged research conversations through brown bag lunches, workshops and colloquia, and foster collaborative spaces across Purdue that are driven by the artistic, humanistic and social scientific strengths of the college in understanding and solving global grand challenges.

The nine clusters are:

» environment, politics and society
» culture, narratives, design: digital humanities
» health, community and society
» gender, family and work
» science, technology and society
» culture, globalization and community
» policy, society and government
» diversity and inequality
» language and communication

Information on Research Cluster events is continually updated on the College research website at www.cla.purdue.edu/research.

Writer: Mohan Dutta is associate dean in the College of Liberal Arts. He can be reached at mdutta@purdue.edu.

Team Aims to Prevent Crop Losses from Future Disasters

When heavy rains ravaged the Midwest in June 2008, submerging large patches of farmland in muddy waters, the United States agricultural industry lost billions of dollars through washed-off soil and resultant crop damage. To minimize losses from similar disasters in the future, a team of climatologists, crop modelers, agronomists, economists and social scientists in the Corn Belt aims to develop sophisticated support tools based on historical climate patterns.

Funded with a $5 million grant from the United States Department of Agriculture, the team led by Purdue professor Linda Prokopy is examining how crop viability is affected by events such as rainfall and drought.

“We’re trying to make climate information more useful and useable to producers so that they can make longer-term planning decisions — how to plant crops, where to plant them and what kind to plant for maximum efficiency,” says Prokopy of the study, which encompasses a 12-state region stretching from the Dakotas to Ohio.

Viability and variability

Agricultural crops contribute about $150 billion annually to the U.S. economy, most of which comes from the intensely cultivated Midwest. Their viability relies in part on increasingly variable climate patterns.

The new project, Useful to Usable (U2U): Transforming Climate Variability and Change Information for Cereal Crop Producers, will study biophysical and economic impacts of different climate scenarios on corn and soybean yields in the North Central region. Researchers also will study how producers and advisors are likely to use the information.

“Currently, climate information isn’t very useable — it’s scattered in a lot of different places, and the models don’t fully expand on crop use. Farmers don’t have time to troll the Internet looking at different sites, so they’re not using the information, which is having deleterious effects on the environment,” she says.

Building a foundation of knowledge

The U2U project is being funded by the Agriculture and Food Research Initiative (AFRI), the USDA’s National Institute of Food and Agriculture flagship competitive grant program established by the 2008 Farm Bill. AFRI supports work in six priority areas: plant health and production and plant products; animal health and production and animal products; food safety, nutrition and health; renewable energy, natural resources and the environment; agriculture systems and technology; and agriculture economics and rural communities. Funded programs use a disciplinary-based approach to building a foundation of knowledge for solving current and future problems.

Along with collecting historical information on climate variables and crop outcomes, the U2U team members will imbed decision-making tools into the software they’re developing. Ultimately, that will help farmers, extension educators and other agricultural professionals maximize crop yields even in the face of disaster.

“If they don’t know what’s likely to happen, they won’t change what they’re doing. That’s the rational thing to do — to not change if you don’t know what else is needed,” Prokopy says. “But this is such a critical region of the world’s food supply, and we want to ensure we can grow crops in a sustainable manner.”
Purdue Launches Data Management Hub

Cyberinfrastructure-based research has infinitely increased the amount of data being collected and analyzed. Growing demands, both social and political, are driving the importance of sharing the information. But who should have access to it, how long should its shelf life be, and how will other researchers access it? Those questions can be addressed through two services offered by Purdue University: a research data hub and data curation profiles.

Research Data Hub

The newly created Purdue University Research Repository (PURR), located at http://research.hub.purdue.org, provides a platform for managing and disseminating information while also offering updated information on data management plan creation. Developed through a collaboration of Libraries, ITaP (Information Technology at Purdue) and the Office of the Vice President for Research (OVPR), the HubZero-powered site helps researchers comply with new National Science Foundation requirements for data management plans in proposals.

A Data Management Plan tool developed by the Libraries serves as a do-it-yourself kit for creating data management plans. Other resources on the hub help researchers navigate the process of making their data available (in essence, “publishing” it) in ways that suit their research objectives.

“Libraries faculty can work through the DMP tool with investigators to help them identify and understand data management needs, regardless of whether someone needs a data management plan or just wants to expand discovery and dissemination of research outputs,” says Scott Brandt, associate dean for research and professor of library science with Purdue University Libraries.

Data Curation Profiles

Long before NSF requirements, Purdue Libraries were fine-tuning an instrument called the Data Curation Profile, which assesses needs related to the discovery and dissemination of research data. Completed profiles identify how data will be managed, archived and preserved so that it is accessible to a wide group of people and over a long period of time.

“The profiles can benefit faculty who are at a point in their research where they are looking at options for making data available,” says Brandt. “On the other hand, the DMP Tool is for researchers who are initiating new projects, especially where data management plans are required as part of the proposal.”

Libraries faculty can collaborate with researchers to work through the profile and, as appropriate, use their expertise to connect researchers with resources that can help enhance management, discovery and dissemination of data.

“By walking through the profile process, a researcher can see issues related to data workflow that will likely affect making data available later on,” says Jake Carlson, associate professor in the Libraries who developed both the Data Curation Profile and the Data Management Plan Tool.

Libraries faculty can assist researchers in creating a Data Curation Profile. For a list of librarian contacts along subject lines, visit www.lib.purdue.edu/rguides/instructionalservices/librarians.html.

Libraries Offers Open Access Publishing through e-Pubs

As a service to the Purdue campus community, the Purdue University Libraries provide Purdue e-Pubs (http://docs.lib.purdue.edu/), an online repository where researchers can upload and provide online access to papers, presentations, reports, and more. Purdue e-Pubs is already home to a growing body of freely accessible article manuscripts, technical reports, working papers, conference proceedings and students’ scholarship.

As Mark Newton, assistant professor of library science and digital collections librarian, explains, "With scholars and academic institutions worldwide rethinking how to ensure that their published findings achieve maximum impact, Purdue e-Pubs provides the University community with stable access to published scholarship — such as working papers, journal articles, dissertations and theses — in addition to traditional journal subscription models."

Purdue e-Pubs is also a full-featured publishing platform used by the Purdue University Press to support the publication of original peer-reviewed, scholarly, open access journals. "Depositing scholarly work into an open repository such as e-Pubs exposes the full-text work to academic search engines such as Google Scholar, ensuring discoverability and giving scholars instant global access," Newton says.

Already, 10 original journals are being regularly produced through Purdue e-Pubs with assistance from the Purdue University Press, including the International Journal of Problem-Based Learning (IJPBL), the Journal of Pre-College Engineering Education Research (J-PEER) and, starting in fall 2011, the inaugural issues of the Journal of Purdue Undergraduate Research (JPUR) and the Journal of Aviation Technology and Engineering (JATE).

To start using Purdue e-Pubs, contact Newton at epubs@purdue.edu.
Promotions and Appointments

Suresh V. Garimella, the R. Eugene and Susie E. Goodson Distinguished Professor of Mechanical Engineering and director of the NSF Cooling Technologies Research Center, has been appointed Purdue University’s first associate vice president for engagement. Garimella, who spent the past year as a Jefferson Fellow working with the U.S. State Department program to engage the science, technology and engineering communities in the formation and implementation of foreign policy, began his new role on Aug. 15.

Julie K. Griffith, formerly Duke Energy vice president for government affairs and foundation relations, has become Purdue University’s vice president for public affairs as part of a reorganization that brings government and community relations and economic development efforts under one office. The position was previously vice president for government relations, a job which has been vacant since 2008. As part of the reorganization, the office also will assume engagement activities.

Lisa Mauer, associate professor of food science, has been appointed interim director of the Center for Food Safety Engineering. Mauer, a member of the center, received a bachelor’s degree in food science from Purdue and a doctoral degree in food science from the University of Minnesota. Her research has focused on the effects of processing on functional, physical and structural properties of food ingredients, as well as pathogen detection.

Vlad Shalaev has been appointed as scientific director for nanophotonics in the Birck Nanotechnology Center. Shalaev is the Robert and Anne Burnett Distinguished Professor of Electrical and Computer Engineering and Professor of Biomedical Engineering. He is the recipient of numerous awards, including the 2010 Max Born Award of the Optical Society of America and the 2010 Willis E. Lamb Award for Laser Science and Quantum Optics.

Mark Van Fleet, a former senior executive with the U.S. Chamber of Commerce, has been named executive director of Purdue’s Global Business Engagement Initiative. Van Fleet will lead the initiative that offers international business development resources, consulting services, cross-cultural orientation and connections to foreign trade and investment partners. Van Fleet holds degrees from Princeton University and the University of Virginia, where he also completed coursework for his doctorate. A former U.S. Foreign Service officer, he served as assistant cultural attaché for the U.S. Embassy in Thailand before joining the chamber.

New Addition to the Office of Industry Research and Technology Programs

Geanie Umberger has joined the Office of the Vice President for Research as assistant vice president for corporate and foundation relations. A graduate of the University of Kentucky, she holds a bachelor’s degree in pharmacy, a master’s in public health and a Ph.D. in anatomy and neurobiology. Umberger was previously administrative director for clinical and translational science in the Center for Clinical and Translational Research at the University of Kentucky. In her new position, she will identify and facilitate collaborations between industry and investigators, programs, centers, departments, start-up companies, and community partners.

Industry Research Assists with Private Partnerships

The Office of Industry Research and Technology Programs (OIRTP) provides a single point of contact for the private sector to access Purdue’s broad range of research resources. In addition, the office promotes and facilitates partnerships between Purdue University and the private sector. Faculty members and private sector companies are encouraged to contact OIRTP staff for help in establishing technology-based partnerships with Purdue.

Please contact:

John A. Schneider
Assistant Vice President for Industry Research
Phone: 494-5532
Email: jas@purdue.edu

Geanie H. Umberger
Assistant Vice President for Corporate and Foundation Relations
Phone: 496-3723
Email: gumberger@purdue.edu

Lisa A. Muncy
Administrative Assistant
Phone: 494-0743
Email: lamuncy@purdue.edu

New Addition to the Office of the Vice President for Research

Geanie Umberger has joined the Office of the Vice President for Research as assistant vice president for corporate and foundation relations. A graduate of the University of Kentucky, she holds a bachelor’s degree in pharmacy, a master’s in public health and a Ph.D. in anatomy and neurobiology. Umberger was previously administrative director for clinical and translational science in the Center for Clinical and Translational Research at the University of Kentucky. In her new position, she will identify and facilitate collaborations between industry and investigators, programs, centers, departments, start-up companies, and community partners.
## Sponsored Program Year-to-Date Activity

### Awards by Sponsor

July 1, 2010 to June 30, 2011

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>NO.</td>
<td>$ AMOUNT</td>
<td>NO.</td>
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<tr>
<td>National Science Foundation</td>
<td>330</td>
<td>98,398,191</td>
<td>418</td>
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<tr>
<td>Dept. of Health and Human Services</td>
<td>310</td>
<td>58,987,465</td>
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<tr>
<td>Dept. of Defense</td>
<td>289</td>
<td>39,569,086</td>
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<tr>
<td>Dept. of Energy</td>
<td>141</td>
<td>35,678,390</td>
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<td>Dept. of Agriculture</td>
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<td>31,436,041</td>
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<tr>
<td>National Aeronautics and Space Administration</td>
<td>60</td>
<td>6,028,311</td>
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<tr>
<td>Other Federal</td>
<td>123</td>
<td>13,364,348</td>
<td>103</td>
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<tr>
<td>Dept. of Education</td>
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<td>9,120,927</td>
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<td>Environmental Protection Agency</td>
<td>26</td>
<td>2,566,336</td>
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<tr>
<td>Dept. of Transportation</td>
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<td>3,187,660</td>
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<tr>
<td>Agency for International Development</td>
<td>27</td>
<td>8,381,406</td>
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<tr>
<td><strong>Total Federal</strong></td>
<td>1,503</td>
<td>$306,718,161</td>
<td>1,499</td>
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<tr>
<td>Industrials and Foundations</td>
<td>1,671</td>
<td>65,596,871</td>
<td>1,488</td>
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<tr>
<td>State/Local Governments</td>
<td>202</td>
<td>27,184,500</td>
<td>204</td>
</tr>
<tr>
<td>Purdue Research Foundation/Purdue University</td>
<td>801</td>
<td>12,894,862</td>
<td>510</td>
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<tr>
<td>Foreign Governments</td>
<td>22</td>
<td>7,164,115</td>
<td>31</td>
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<tr>
<td><strong>Total Non-Federal</strong></td>
<td>2,696</td>
<td>$112,840,348</td>
<td>2,233</td>
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<tr>
<td><strong>Total Purdue System-wide</strong></td>
<td>4,199</td>
<td>$419,558,510</td>
<td>3,732</td>
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</tbody>
</table>

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**Data provided by Sponsored Program Services**

Comprehensive monthly awards list includes search and sort capabilities
A list of sponsored program awards received is available online.

A search and sort Excel file version of the awards is also available online. Please visit the OVPR Website at [www.purdue.edu/research/vpr/](http://www.purdue.edu/research/vpr/) for access to the awards.
The NIH is comprised of 27 different Institutes and Centers (ICs). Which IC you choose can mean the difference between funding and rejection. This presentation will help explain the differences of the ICs and how to determine the best fit for your proposal.

When
November 2, 11:30 a.m. to 1 p.m.
Contact Perry Kirkham, pkirkham@purdue.edu

This series of workshops will provide a detailed overview of the process for strategically planning and submitting a proposal to the National Institutes of Health (NIH). Lunch is provided so registration is required and will be available approximately one month prior to each event at www.purdue.edu/research/vpr/rschdev/calender_grantsmanship_events.php.

When
September 20, 11:30 a.m. to 1 p.m.
Contact Sue Grimes, sgrimes@purdue.edu

David Morrison, of Grant Writers’ Seminars and Workshops, LLC, will return to the Purdue campus this fall for this popular grant writing seminar. Contact your associate dean for research to learn more about the seminar and subsequent opportunities. Registration is required and will be available in early October at: www.purdue.edu/research/vpr/rschdev/calender_grantsmanship_events.php.

When
November 17, 8:30 a.m. to 4:30 p.m.
Contact Jenny Kelly, 496-6788, jckelly@purdue.edu

Louise Oliver, former ambassador to UNESCO, will speak to the challenges and opportunities in addressing global challenges.

When
September 8-10
Where Stewart Center and Purdue Memorial Union
Contact Kathy Walters, 494-2758, kw@purdue.edu

The conference will examine how terrorism has been perceived and represented over the centuries in literature, art, theater, and most recently, in the audio-visual media. Participants will discuss how to encourage a more flexible response to one of the most serious problems confronting the world today.

When
October 24
Where Schowe House (Global Policy Research Institute)
Contact Jenny Kelly, 496-6788, jckelly@purdue.edu

Louise Oliver, former ambassador to UNESCO, will speak to the challenges and opportunities in addressing global challenges.

When
November 10, 10:30 a.m.
Where Lawson Computer Science Building Foyer

A panel of top science journalists will join new science laureates in a one-hour public town hall meeting.

Moira Gunn, a Purdue alumnus and host of “Tech Nation” and “BioTech Nation,” which are public radio shows, will moderate the discussion, during which questions will be taken from the audience.

Both are free and open to the public. The forum will be taped for later broadcast on “Tech Nation.”

This presentation will help resolve some of the common questions surrounding a successful NIH proposal including proposal content, templates, and the review process as well as an overview of Purdue’s available resources.

When
November 2, 11:30 a.m. to 1 p.m.

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

When
February 16, 2012, 11:30 a.m. to 1 p.m.
Upcoming Events

6th Annual KIST/Purdue Symposium

» When  September 6, 8:30 a.m.-2:30 p.m.
» Where  Burton D. Morgan Center for Entrepreneurship Room 121
» Contact  Cindy Ream, 494-0015, cream@purdue.edu

High Impact Research to Society at Purdue and the Korean Institute of Science and Technology (KIST)

Nobel Celebration Symposium

» When  October 3-4
» Where  Stewart Center and Fowler Hall
» Contact  Steve Scherer, 494-5204, scherer@purdue.edu

In honor of 2010 Nobel Laureate Ei-ichi Negishi, Purdue University is hosting a two-day symposium featuring speakers from Asia, Europe and the United States.

Cancer Culture and Community

» When  November 3, 7:30 p.m.
» Where  Fowler Hall
» Contact  Kris Swank, 494-4674, kswank@purdue.edu
» Website  www.purdue.edu/discoverypark/oncological/programs/ccc

Noah Hutton, director, and Seun Adebiyi, Olympic hopeful, discuss the making of the documentary More to Live For. The film focuses on three men, including Adebiyi, who are awaiting bone marrow transplants. The keynote presentation is part of a series of events for the annual Cancer Culture and Community Colloquium, which also includes bone marrow registries, a screening of the movie and student workshops.

Ecological Sciences and Engineering (ESE) Symposium

» When  November 8-9
» Where  Discovery Park
» Contact  Jen Roath, jroath@purdue.edu
   Linda Lee, 494-8612, lslee@purdue.edu

The symposium, a student-run, interdisciplinary event, provides undergraduate and graduate students with an opportunity to present their research and interact with experts in various environmental fields. It also raises awareness about the ESE program and other environmentally focused initiatives at Purdue.

Energy and Environment Events

Shell Energy Day

» When  September 22, 7:30 a.m. to 3:30 p.m.
» Where  Purdue University
» Contact  John W. Bickham, Center for the Environment, Purdue University, environment@purdue.edu

This event, New Frontiers in Oil and Natural Gas Exploration will feature morning panel presentations on oil spills, deepwater drilling and natural gas along with an afternoon student poster session and judging. Registration and poster submission will open shortly at www.purdue.edu/dp/shell2011.

China-U.S. Joint Symposium

» When  September 25-28
» Where  Purdue University
» Contact  John Bickham, Center for the Environment, Purdue University, environment@purdue.edu

The meeting annually brings together top Chinese and American researchers in the areas of biofuels, alternative energy, environmental impacts and climate. The 2011 meeting is expected to include up to 150 scientists and graduate students, including 25-30 Chinese participants. For additional information, registration and poster submission, please visit www.purdue.edu/discoverypark/sustainability/symposium.

China-U.S. Joint Symposium}

» When  October 3-4
» Where  Stewart Center and Fowler Hall
» Contact  Steve Scherer, 494-5204, scherer@purdue.edu

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Life Sciences Events

Ingestive Behavior Research Symposium on Flavor and Feeding

- When: September 21-23
- Where: Stewart Center, Rooms 206 and 214
- More: www.conf.purdue.edu/flavor; Kim Stockment, Conference Coordinator, 494-7225, stockme@purdue.edu

The conference will focus on physiological processes underlying flavor perception; influence of each of the sensory components of flavor on feeding; clinical applications of flavor; and use of flavor by the food industry.

Sponsored by NIH Funding Grant, Phyllis Izant Fund and Purdue University

International Breast Cancer Prevention and Nutrition Symposium

- When: October 9-11
- Where: EHESP School of Public Health, Rennes, France
- Contact: Kristine Swank, 494-4674, kswank@purdue.edu
- Register: www.purdue.edu/breastcancer

The Second Annual Symposium on Breast Cancer Prevention: Epigenome, Nutrition and Public Policy will bring together experts in biology, epidemiology, medicine, nutrition, communication, education and public policy from around the world. Organized by the International Breast Cancer and Nutrition Project along with the French School of Public Health, the conference focuses on the relationship between disease, prevention, heritage and environment to help researchers determine why breast cancer incidence is rising at different rates throughout the world.

Life Sciences Business Plan Competition

- When: November 10
- Where: Purdue University
- Contact: Jackie Lanter, Burton D. Morgan Center, 494-1335, lanter@purdue.edu

The Purdue Life Sciences Business Plan Competition aims to foster translational research and accelerate the commercialization of intellectual property in the life sciences arena. The event offers $100,000 in prizes for the nation’s most promising startup life-science businesses.

International Education Research Conference

Transforming Education: From Innovation to Implementation

- When: October 10-12
- Where: Purdue University
- Contact: Cele Flanary, 494-1844, cflanary@purdue.edu
- Register: www.eduinnovatepurdue.com

Hosted by the Discovery Learning Research Center, the conference will bring together academic researchers, practitioners and policymakers to help educators transition proven STEM education initiatives from research centers into classrooms. Conference participants will assemble and share the most current results for research demonstrating student success in undergraduate education; create a white paper document on best practices; and forge partnerships to pursue new research.

Drug Delivery and Cancer: Challenges and New Directions for Cancer Therapy

- When: October 10-11
- Where: Pfendler Hall (PFEN) 241
- Contact: Kim Crist, 494-8659, kkcrist@purdue.edu
- Info: www.cancerresearch.purdue.edu/events/ddc

Instead of discussing recent successes in drug delivery, organizers of this conference want to focus on unsolved problems that impede progress, and to determine why so many promising leads have failed to produce major improvements in cancer chemotherapy. An international panel of experts will present their perspectives on practical problems in drug delivery. By holding an honest and introspective discourse on the present limitations in drug delivery research, organizers hope to better define the factors that have kept promising drug delivery systems from achieving their full potential.
Access Existing Research Facilities at www.purdue.edu/research/cores/

The Office of the Vice President for Research (OVPR), together with academic areas and organizations on campus have identified more than 90 University-level research core facilities operating at Purdue. These research core resources may include instrumentation, equipment and facilities (including databases), software, and professional expertise in the design and conduct of specialized measurements, analysis and interpretation of data, and research collaboration.

Research cores are available to investigators and research teams on campus and, in many cases, outside entities as well. Various cost recovery models are used by the core.

A list of Purdue’s research cores is located on the OVPR Web site at www.purdue.edu/research/cores/. Please contact the individual core manager for information about capabilities, availability and funding methods of a core.

For more information about requirements to be considered a research core contact Ned Howell, ned@purdue.edu, managing director for launching centers and institutes.