

AGRICULTURAL & BIOLOGICAL ENGINEERING

Issue 3- March 12, 2008

Funding Opportunities

Fulbright Scholar Program - nearly 850 U.S. faculty and professional travel abroad each year. Awards are available in 45 disciplines and most countries also have "All Disciplines" grants - open awards that allow applicants to shape their own projects and often choose the institution that will host them. The competition for traditional Fulbright Scholar Awards opens March 1st with an application deadline of August 1st - more information is available at: http://www.cies.org/download/viewbook2.pdf.

Discovery Learning Center (DLC) - is pleased to announce its 2008 Seed Grant program. DLC will offer incentive grants of up to \$25,000 to multidisciplinary teams of Purdue faculty with the specific goal of stimulating submission of proposals for externally funded research in the science of learning, the development and evaluation of learning related technologies, and/or the assessment of innovative, interdisciplinary educational programs. Projects resulting in proposals for externally funded research that will make use of the capabilities of the new DLC building (due to open by the end of Fall 2009) are strongly encouraged, but this element is not required. Awards may be used for summer salary, faculty release time, travel, equipment, materials and supplies, graduate student support, conferences, consultants, or other costs directly related to the development and submission of a major research proposal. Faculty receiving a seed grant agree to submit an appropriate external grant proposal through the Discovery Learning Center by June 2009. However, all seed grant funds must be expended by December 31, 2008. No extensions can be granted. Each award will be made in two parts, with the Fall 2008 allocation of funding contingent upon the completion of a draft proposal for external funding by the end of Summer 2008. Seed grants will not be awarded for instructional equipment, service learning projects, general course improvement ideas, or other projects that might improve teaching and learning at Purdue but that are not designed to lead to a major collaborative proposal for external funding, that do not have a learning research component, and that are not likely to lead to major impacts well beyond Purdue.

Proposal Requirements: Applicants must submit a proposal of no more than 4 pages (11 pt. font or larger, single sided) detailing their request for funding, including: A summary of your research

question, project, or objective (brief abstract), Significance of your project to the field of learning research, How your project furthers the mission of the Discovery Learning Center, Plans for submission of an external research proposal, Budget summary. A Transmittal check sheet and full COEUS budget are not required at the time of submission, but will be required for awarded projects.

Eligibility: Purdue faculty and research scientists who are DLC affiliates are eligible to apply. Affiliate information can be found at www.purdue.edu/dp. Applications should include two or more Principal Investigators (PIs) with at least one from Purdue University.

Funding Amounts: Approximately \$150,000 is available for funding. We anticipate making awards ranging from \$5,000 to \$25,000. Additional cost share from departments and colleges/schools in the form of faculty release time, graduate student support, or other funding is encouraged. All seed grant funds MUST be expended by 12/31/08.

Submission Deadline: Proposals are due by email (pdf attachments to wburgess@purdue.edu) by 5:00 PM, March 31,

2008. Decisions will be made by April 15th.

Projects/Grants Funded

Richard Stroshine - \$5,697. Agricultural Research Service. "Physical and Chemical Properties of Shelled Corn Related to Conditioning, Drying, and Processing."

Dennis Buckmaster - \$14,378. Technology Innovation Award Program. "Improved Tandem Bicycle Transmission."

Ileleji, K.E. and B. Zhou - 2008 - The angle of repose of bulk corn stover particles. Accepted on February 2008, in Powder Technology, in press, ARP# 2007-18160.

Dr. Chang Lu group (Wang, F., Wang, H., Wang, J., Wang, H.Y., Rummel, P.L., Garimella, S.V. and Lu, C.) - Microfluidic delivery of small molecules into mammalian cells based on hydrodynamic focusing. Biotechnology and Bioengineering, in press) will appear as the cover article of the upcoming issue (100:1) in the journal Biotechnology and Bioengineering.

Bao. N., Wang. J. and Lu. C. - Microfluidic electroporation for selective release of intracellular molecules at the single cell level. *Electrophoresis*, accepted.

Engel Bernard: Chaubev Indrajeet: Farnsworth. Rochard L and Hunter. James G -\$76,472. Geological Survey, U.S. "Web-Based Low Impact Development Decision Support and Planning Tool".

Ladisch Michael and Mosier Nathan - \$52,000. Dow Agrosciences. "Whole-Plant Bio-Processing for Ethanol Production".

Maier, Dirk - \$17,500. Indiana Soybean Alliance. "Indiana Soybean End-Use Quality Traits Initiative (Year 4)".

Mohtar, Rabi - \$25,920. lowa State University. "US-India Consortium on International Water Management".

<u>Papers</u>

Srivastav, R.K., K.P. Sudheer, and I. Chaubey - 2007. A simplified approach to quantify predictive and parametric uncertainty in artificial neural network hydrologic models. Water Resources Research 43, W10407, doi:10.1029/2006RW005352.

Dennis Buckmaster - rcently had articles published in <u>Agriculture Online</u>, <u>Farm and Dairy Online Edition</u>, and <u>The Farmer's Exchange</u>.

Sudheer, K.P., I. Chaubey, V. Garg, and K.W. Migliaccio -

2007. Impact of time scale of calibration objective function on the performance of watershed models. Journal of Hydrological Processes 21:3409-3419. DOI:10.1002/hyp.6555.

Migliaccio1, K.W., B.E. Haggard, I. Chaubey, and M. Matlock - 2007. Water quality monitoring at the War Eagle Creek Watershed, Beaver Reservoir, Arkansas. Transactions of the ASABE 50(6):2007-2016.

ABE in the News/Awards/Presentations



Chang Lu - Assistant professor of Agricultural and Biological Engineering, Biomedical Engineering (by courtesy), and Chemical Engineering (by courtesy), was selected for the NSF CAREER Award for his proposal titled "Transfected cell microarray technology based on microfluidic electroporation". The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization.

Chaubey, I., M. Gitau, L. Chiang, J.H. Popp, E. Gbur, M.A.

Nelson, J. Pennington, G. Rodriguez, and B. Kurz - 2008. BMP effectiveness assessment for a pasture dominated watershed: results from two years of CEAP assessment. Annual Conference of the USDA-CSREES. Sparks, NV. February 4 - 7, 2008.

Rabi Mohtar - is the 2008 Purdue University Agricultural Research Award winner! The College recognizes one outstanding researcher with this award each year. Rabi will receive this award at a ceremony on Monday, April 7, 2008 at 2:30 p.m. in the Dean's Auditorium at Pfendler Hall.

Joseph Irudayaraj - Most assessed article in Analytical Chemistry in 2007: "Multiplex Biosensor Using Gold Nanorods", published in *Analytical Chemistry* is being featured on the ACS Publications website -

http://pubs.acs.org/journals/promo/most/most_cited/index.html - as one of the Most-Cited Articles published in 2007 and cited through the period ending December 31, 2007.

Dirk Maier - has accepted a new position at Kansas State University as head of the Grain Science and Industry Department.

Dirk
has contributed
greatly to programs in the ABE
department and beyond while at Purdue,

and he will be missed. Dirk anticipates starting his new position on April 1, 2008.

Dirk's "Farewell Celebration" will be Monday, March 17th at The Beck Center from 3:30 pm to 6:00 pm - please stop by and wish Dirk the best of luck with his new position!

Gitau, M.W., L. Chiang, I. Chaubey, and M. Sayeed - 2008. Evaluating BMP scenario under CEAP: approaches to handling a multitude of runs and large datasets. Annual Conference of the USDA-CSREES. Sparks, NV. February 4 - 7, 2008.

Amy Penner - ABE Grad and current ABE Grad Student was recently quoted in a <u>Wall Street Journal</u> article about Campus Romances read the article at - http://news.uns.purdue.edu/Clips/2008/jan/080131CampusRomance.html.

Student News

David Pyle & Jennifer Allen - congratulations to both ABE students who were awarded a CAR Award (Community Activity Recognition Award) - this award is given to Purdue students who go above and beyond the average call for local community activities while maintaining a high level of academic achievement.



Alumni News



David Doster (ABE BS '79) - is working for MW Universal Inc. which is a privately held corporation specializing in metals manufacturing and assembly the company owns and operates 11 facilities for metals forgings, castings, stampings and assemblies throughout the United States.

FYI

Healthy Purdue – is back for 2008 and is offering two levels of incentives, one for getting informed about your health and another for then taking action to improve or maintain it, this initiative encourages and rewards participation in health-promoting activities. Benefit-eligible faculty, staff and long term disability participants from West Lafayette, Calument, Fort Wayne and North Central campuses hired before January 2, 2008 and their spouses/same-sex domestic partners may participate. For more information visit the web site at: www.purdue.edu/healthypurdue.



CIGR International Symposium on FOOD AND BIOPROCESS TECHNOLOGY (4th **CIGR Section VI International Symposium)** - Following the successful 1st International Symposium on *Bioproducts Processing and Food Safety* held in Beijing in October 2004, the 2nd one on *Future of Food Engineering* in Warsaw in April 2006, and the 3rd one on *Food and Agricultural Products: Processing and Innovations* in Naples in September 2007, the CIGR Section VI is organizing the 4th Technical Symposium on *Food and Bioprocess Technology* in Iguassu Falls City (Brazil) on 31 August - 4 September 2008, in conjunction with the 2008 CIGR International Conference - Brazil. A s the last three symposiums, selected papers presented at this Symposium will be published in a special issue of *Food and Bioprocess Technology: an International Journal* published by Springer.

Topics to be covered are:



Topic I - Food; Physical properties and structure, Food processing, Food innovations, Food equipment, process control and automation, Food safety and security, Preservation, storage, and distribution, Emerging natural ingredients for food and beverages, Applied nanotechnology, Non-thermal processing and emerging technologies, Mathematical modelling and simulation.

Topic II - Agriculture; Pre-harvest effects, Post-harvest handling systems, Non-destructive testing Sensors, sensing technology and process control, Product monitoring in the supply chain, Preservation, storage, and distribution, Tracking and traceability.

Topic III - Environment; Sustainability in food production, Agri-food waste treatment and management, Renewable energy source.

You are invited to submit a paper to the Symposium. Please note the following dates: March 30th, 2008 - Submission of papers (please use template file), April 30th, 2008 - Notification of acceptance June 15th, 2008 - Registration for authors with discount, June 15th, 2008 - Final Program August, 31st to September 4th, 2008 - Conference. Please visit http://www.ctaa.embrapa.br/4cigrsection6/ for paper submission and further information, or directly go to the submission page at: http://www.acquacon.com.br/icae/en/callpapers.php.



Boilersphere – alumni, students, supporters, and faculty and staff have a new way to connect, reconnect and network – Boilersphere a web-based networking site exclusive to Purdue people launched January 28th – check it out at http://www.purdue.edu/boilersphere.

The ABE Distinguished Agricultural Alumni is Dr. Jeffrey Arnold. Dr Arnold and his wife will be visiting the ABE department on March 20th and 21st – be sure and stop by at any of the planned activities (posted within the ABE department) and congratulate him!





<u>Calendar</u>

March 2008	
20	Distinguished Agricultural Alumni - visiting the ABE department
21	Distinguished Agricultural Alumni Convocation and Reception - contact D. Claeys at 496-
	7894
28	ABE Faculty Meeting 11:30 am ABE #301
31	Undergraduate Research & Poster Symposium - Purdue Memorial Union Ballrooms -
	contact J. Alexander at 494-8470
April 2008	
11	ABE Faculty Meeting 11:30 am ABE #301
12-13	Spring Fest - contact D. Kirkpatrick at 494-9113
17	ABE Alumni/Student Banquet
22-23	Cooperative Extension Service Professional Development Conference - contact J. Bechman at 494-8309
25	ABE Faculty Meeting 11:30 am ABE #301
May 2008	
9	ABE Faculty Meeting 11:30 am ABE #301
21	Spring Fling
June 2008	
17-20	State 4-H Junior Leader Conference - Indianapolis, contact S. McKinley at 494-8435
July 2008	
14	Indiana Black Expo Children's Day - Indiana Convention Center, contact E. Kirkpatrick at 494-9113
August 2008	
6-17	Indiana State Fair - contact D. Kirkpatrick at 494-9113
September 2008	
15-19	Galaxy III Conference in Indianapolis -
	http://sharepoint.agriculture.purdue.edu/ces/galaxy/default.aspx