



From Department Head - Bernie Engel

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ABE News!

The Purdue Agricultural and Biological Engineering department as been named the number one graduate program by U.S. News and World Report for the Second Year!

Greetings! We are delighted that our graduate program was recently ranked number 1 by U.S. News and World Report for the second straight year (we are tied for number 1 with the University of Illinois). The success and recognition of our graduate and undergraduate (ranked number 2 by U.S. News and World Report last August) programs would not be possible without the outstanding faculty, staff and students in our program and our alumni who represent Purdue ABE so well.



We have recently enjoyed seeing the latest class of ABE students earn their degrees and become ABE Alumni! For a complete list of our newest alumni, see page 6. Congratulations to all.

In this issue we have several ABE alumni highlights; on page 2 we highlight our Distinguished Agricultural Alumni Mr. Edward Vondell and our Distinguished Engineering Alumni Mr. Thomas Burke. Both are most deserving of these recognitions. On page 4 we spotlight our three ABE Outstanding Alumni (Michael Cox, Brad Meyerholtz and Mark Zeltwanger) who were recognized in April for their outstanding accomplishments.

We recently recognized several of our ABE Outstanding Students, and you can read more about them on page 7. They are certainly impressive in both their many accomplishments and their community and campus involvement.

You can read about our newest faculty on page 5, and our departmental awards, faculty promotions and Professor Narsimhan's selection as an AIChE Fellow on page 3. You can find extended articles as well as the most current news about our program (ABE-Notes) on the ABE web page at www.purdue.edu/ABE.

Be sure to keep your information current with Micky Creech at mcreech@purdue.edu. Micky also assists students in identifying job and internship opportunities, as well as keeping alumni informed of ABE events and job opportunities. Please share your current information or any employment opportunities with her.

Boiler Up!

Bernie

Our Mission

“To prepare students, citizens, and the industry for the future through innovative education and extension/outreach program, and the discovery of knowledge.”

2010 ABE Distinguished Alumni

Edward Vondell Named 2010 ABE Distinguished Agricultural Alumni

Ed Vondell (BS AGE '85) is Head of Product Engineering for Chrysler de Mexico in Mexico and Latin America. He is responsible for design and homologation of products for Mexico and Latin America and continuous engineering work for car and truck platforms. More than 250 engineers report to Mr. Vondell in his role as Head of Product Engineering. Chrysler de Mexico received the "Premio Nacional de Tecnología 2007" (National Technology Award for 2007) under his direction.

Prior to this position, Mr. Vondell was Plant Manager of the Daimler Chrysler Indiana Transmission Plant II located in Kokomo, Indiana. As Plant Manager he was responsible for all aspects of the operation in Kokomo. The plant produced a Rear-Wheel Drive, Five Speed Automatic Transmission used in the Chrysler 300C, Dodge Charger, Jeep Grand Cherokee and Jeep Commander. The Indiana Transmission Plant II was awarded the Daimler Chrysler Operational Excellence Award for 2005 under Vondell's leadership. This recognition was awarded to the plant because of the excellent safety, quality, and cost results in 2005.

In 2007, Ed Vondell was recognized as an outstanding alumnus of the Purdue University Department of Agricultural and Biological Engineering in recognition of his career success and engagement of our program. When asked how his ABE degree helped him, Ed stated - "The ABE program helped me develop a solid problem solving mind-set. Not only individual problem solving, but learning how to solve problems in a group setting. This has been valuable throughout my career."

The Purdue Distinguished Agricultural Alumni Award is presented to mid-career Purdue Agriculture graduates who have made significant contributions to their profession, or society in general.



Thomas Burke Named ABE 2010 Distinguished Engineering Alumni

Tom Burke (BS AGE '79) is President and Chief Executive Officer of Modine Manufacturing Company, located in Racine, Wisconsin. Mr. Burke joined Modine Manufacturing Company in 2005 as Executive Vice President. In July 2006, he was promoted to the position of Executive Vice President and Chief Operating Officer, taking on the responsibilities of streamlining the company's global organizational structure. As Chief Operating Officer, he was in charge of all global operations for the Powertrain Cooling, Engine, Passenger Thermal Management, Commercial and Fuel Cell Products Groups, as well as the Environmental, Safety and Security Department.

Mr. Burke began his career with Ford Motor Company in the Climate Control Division where he spent 13 years in a variety of engineering and operations positions in the United States and Mexico.

Mr. Burke worked for nine years with Visteon Corporation, where he was Vice President of the North American Manufacturing Operations with responsibility for more than \$10 billion in sales. While there, he led an effort to develop and implement business strategies to enhance the company's global manufacturing product portfolio. Before that, and based in Cologne, Germany with Visteon, Mr. Burke served as Vice President of European and South American Manufacturing and Vice President of North American and Asian Operations.

Mr. Burke serves on the Board of Trustees of the Machinery and Allied Product Institute (MAPI) and as director of the National Association of Manufacturing. In addition, Mr. Burke serves on the Board of Directors of the Racine County United Way. He resides in Racine, Wisconsin with his wife Ginee, and they have two grown children.

The Distinguished Engineering Alumni Award is presented to engineering alumni who have distinguished themselves in any field of endeavor that reflects favorably on Purdue University, the engineering profession, or society in general.



ABE Faculty Recognitions, Promotions and Awards

Ganesan Narsimhan

Named 2010 American Institute of
Chemical Engineers (AIChE) Fellow

ABE Professor Ganesan Narsimhan earned his B.S. in Chemical Engineering from Indian Institute of Technology, Kharagpur and his M.S. and Ph.D. in Chemical Engineering from Indian Institute of Technology, Kanpur in the area of mixing in liquid-liquid dispersions. After spending time as Visiting Assistant Professor in the Departments of Chemical Engineering at Purdue, Notre Dame and State University of New York at Buffalo, he joined the Department of Agricultural and Biological Engineering at Purdue University as Assistant Professor in 1986 in the Food Process Engineering program.

Dr. Narsimhan's area of research is Colloidal and Interfacial Phenomena applied to Food and Biological Systems. He has authored 70 referred publications and 15 book chapters. Dr. Narsimhan has developed comprehensive models for formation, syneresis and collapse of liquid foams and has extended these models to power law fluids commonly encountered in food and biological systems. Dr. Narsimhan was the first to develop stochastic analysis of rupture of thin films subjected to random mechanical perturbations which is useful in the prediction of shelf life of foams due to transportation. He has also developed mechanistic models to predict adsorption of proteins at interfaces in terms of their size, shape, structure and other molecular properties. Dr. Narsimhan has investigated the effect of processing conditions on the formation of protein stabilized emulsions and quantified the effect of conformation of globular proteins on interfacial rheological properties and emulsion stability. He is currently investigating conformational changes of proteins/enzymes adsorbed at interfaces using spectroscopy as well as molecular dynamics simulation. Dr. Narsimhan teaches undergraduate courses in Food Process Engineering and Thermodynamics and graduate level courses in Transport Phenomena and Colloidal Phenomena in Bioprocessing. He has participated in AIChE meetings for the last 25 years and has organized 22 sessions and presented 57 papers at the AIChE meetings.

Founded in the United States in 1908, AIChE is a professional association of more than 43,000 chemical engineers in over 90 countries. In order to be named a AIChE Fellow, members must have been in the chemical engineering practice for a minimum of twenty-five years and have been an AIChE Member for at least 10 years, at least 3 years of which will be in the grade of Senior Member. Election as Fellow is in recognition of distinctive professional accomplishments and significant contributions and testifies to the high esteem in which one is held by peers.

ABE Outstanding Department Teacher - Agriculture - Daniel Ess
 ABE Outstanding Department Teacher - Engineering - Gary Krutz
 ABE Outstanding Department Counselor - John Lumkes
 ABE Agricultural Outstanding Graduate Educator - Indrajeet Chaubey
 ABE Agricultural Outstanding Service to Students Award - Micky Creech
 Teaching Academy Fellow - John Lumkes
 University Faculty Scholar Award - Joseph Irudayaraj
 Epsilon Sigma Phi Alpha Lambda Chapter Distinguished Service Recognition Award - Don Jones
 Epsilon Sigma Phi Alpha Lambda Chapter Meritorious Support Service Recognition Award - Denise Heath and Scott Brand
 Award for Excellence in Distance Learning - Jane Frankenberger, Laura Esman and Brent Ladd
 David C. Pfenler Outstanding Undergraduate Counselor - John Lumkes
 Agricultural 2010 Team Award - Jane Frankenberger, Al Heber and Don Jones

This will be the last ABE newsletter!

Don't worry though we will still publish an electronic ABE newsletter twice per year that will be posted on our web site instead of published and mailed to your home. In addition we will be emailing the next newsletter to you, so be sure and have your current information on file with us. Just email Micky Creech at mcreech@purdue.edu with your latest contact information.

With the rising costs of publishing, printing and postage, not to mention speed of delivery with the Internet, we have decided to publish the ABE newsletter electronically – be sure and check out all our web pages at www.purdue.edu/ABE for the latest ABE department, faculty, alumni and student news and events!

Faculty Promotions

D. Marshall Porterfield -
Professor

Klein Ileleji -
Associate Professor

John Lumkes -
Associate Professor

Jiqin Ni -
Research
Associate Professor

**Further Details Available On Our Web
Page At: www.purdue.edu/ABE**

2010 ABE Outstanding Alumni

Each year the ABE department recognizes and honors alumni and friends of the department who have achieved significant professional, community, educational, and social accomplishments in areas involving agriculture, engineering and technology.

This year's awardees are Michael Cox, Brad Meyerholtz and Mark Zeltwanger



Michael Cox

Michael Cox (BS AGE '93) - Since 2003, Mike has served as the State Conservation Engineer in Indiana for the Natural Resource Conservation Service (NRCS). In this position he is responsible for design and construction oversight by NRCS personnel for all engineering practices in Indiana. He is also currently serving as the state program manager for the Emergency Watershed Protection (EWP) program and for the Watershed Operations program. After the June 2008 flooding in central Indiana, Mike provided engineering leadership to assist local communities with over \$5 M in federal funding for flood recovery and protection efforts through the EWP program. Mike has been a registered Professional Engineer (P.E.) in Indiana since 1999.

Mike credits his success with USDA-NRCS to the diverse coursework in the ABE program and the emphasis placed on working with others to solve problems and projects while at Purdue.

Mike is married to Dyveke, who is also a Purdue graduate and they have three children: Evan 11, Lauren 8, and Benjamin 6. Mike's hobbies include hunting, fishing, camping, and spending time with family.



Brad Meyerholtz

Brad Meyerholtz (BS AGE '89) - is Engineering Manager for Tuthill Drive Systems, a division of Tuthill Corporation. Tuthill Drive Systems is a leader in the steerable, hydraulic powered axle industry. Brad joined Fluidrive in 1989 as a project engineer in charge of new valve designs, hydraulic testing and qualification standards for integrating Mud Hog products with existing OEM hydrostatic systems, as well as the lead engineer for a new line of turf care equipment for the golf course industry. Brad coordinates implementation of Lean Product Development processes and with company wide utilization of Toyota Production System processes.

Brad stated that the most beneficial aspect of a Purdue ABE degree is the diversity. The ABE curriculum included classes across multiple engineering disciplines, which meant both small and large classes, as well as working on teams and as an individual. Brad stated that with the ABE curriculum you get all of these aspects, and in life you frequently need all these aspects and that this diversity has greatly enhanced his career.

Brad is married to Kimberly, who is also a Purdue graduate, and they have two sons, Brian who is currently attending Purdue, and Matthew 14. Brad enjoys sporting events, yard work and hiking.



Mark Zeltwanger

Mark Zeltwanger (BS AGE '80) - Mark enrolled in the ABE program on the recommendation of his father who graduated from the Purdue ABE program in 1949.

Mark's first work experience was with Caterpillar Tractor; from there he joined his family owned farm equipment dealership. In 2007, Mark started consulting with equipment organizations and manufacturers, trying to help resolve issues that arise during the sale of farm dealerships.

Currently, Mark is owner and manager of a recycling and rock crushing firm. Mark's firm developed a portable crusher and screener that takes tons of once thrown away material, such as concrete and asphalt and turns it into usable aggregate for parking lots highways and construction bases.

Mark stated that courses from several engineering disciplines and the classes from Dr. Krutz helped him see the big picture of why and how inventions and increased technology become global saleable products. Mark stated that the reputation of Purdue engineers is world class and speaks highly of the University, and the ABE department.

Mark is married to Michelle and has 3 children; Lauren, employed with Johnson & Johnson, Amy, a junior in Purdue Chemical Engineering and David, a high school senior accepted into Purdue's Krannert School of Management.

Two New Assistant Professors Join ABE - ABE Outstanding Graduate Students

Andrea Vacca -



Andrea Vacca earned his MS degree in Mechanical Engineering from the University of Parma (Italy) and his PhD in Energy Systems from the University of Florence (Italy). For both degrees he pursued research in Heat Transfer and Gas Turbine Blade Cooling Technology. His first research activities were in the fluid power field, focusing on the analysis of the phenomena related to flow through hydrostatic pumps and hydraulic valves through numerical modeling.

At present, his research activities are related to the fluid power discipline. His main interests concern the analysis, modeling and testing of fluid power systems and of hydraulic components. His research goals are the improvement of efficiency, reduction of noise emissions and the improvement of system control. His current research projects are seeking new solutions for valve controlled systems for mobile applications and to formulate new designs for external gear pumps and motors.

Andrea Vacca is author of more than 40 papers, most of them published in international conferences or journals.

Patrick Murphy -



Patrick earned his bachelor's degrees in Agronomy and Agricultural Engineering, his master's degree in Agricultural Engineering, and his doctorate in Agricultural Engineering and Biorenewable Resources and Technology from Iowa State University.

Patrick's research interests are focused on bioenergy crop production, including establishment, crop management, harvesting, and storage. His students are currently working on projects developing methods for evaluating the quality of biomass feedstock's at second generation ethanol plants, developing field equipment for establishing *Miscanthus giganteus*, a sterile high-yielding perennial grass, using rhizomes (underground stems) and to evaluate the short and long term environmental impacts of producing various bioenergy crops in Indiana.

ABE Outstanding Graduate Student - Ph.D - Aeraj ul Hague



Aeraj works with Professor, Marshall Porterfield, and his research has primarily focused on development of "microfabricated lab-on-a-chip based biosensors for fundamental space biology research". These technologies have been expanded to find applications in neurophysiology research, agricultural applications and environmental monitoring.

Aeraj is president of the American Society of Gravitational and Space Biology Student Association, and has received the NASA Earth and Space Science Fellowship. Aeraj also earned the 2010 Purdue Student Engineering Foundation Outstanding Graduate Student Award.

ABE Outstanding Graduate Student - M.S. - Ruth Pinto

Ruth is a graduate student working with Associate Professor, Klein Ileleji. Her research focuses on the use of distiller grains in a higher value end product controlled release fertilizer granules.

After graduation in May, Ruth will be relocating to Houston Texas where she will become a high school math teacher with Teach for America. Teach for America's mission is to build the movement to eliminate educational inequity by enlisting our nation's most promising future leaders in teaching positions.

Ruth has served as the Secretary of the ABE Graduate Student Association, and is an active member of the Women in Engineering Graduate Mentoring Program.



Our ABE students were awarded over \$80,000 in scholarships in 2010! For additional details visit the web page - https://engineering.purdue.edu/ABE/InfoFor/CurrentStudents/scholarship_recipients.html.

2010 ABE Graduates & Graduate Student Recognitions and Awards

Congratulations to our 2010 ABE Graduates!

ASM Graduates

*Benjamin Alyea
Nicholas Barnard
Adam Bell
Aaron Bobeck
Nicholas Bredeweg
Jeffrey Carrell
Craig Clemson
Aaron Flora
Lee Flordice
Beau Froderman
John Hobbs
Alan Hoffman
Heath Hook
Dustin Lindahl
Jason Maple
Daniel Morris
Kyle Musselman
Thomas Nesbitt
Lucas Powlen
Tyler Shaw
Matthew Sroufe
Charles Young*

ABE Graduates

*Nicholas Avon
Lisa Bartkowiak
Phillip Burbrink
Danielle Carpenter
Robert Caylor
Craig Cessna
Anthony Czapla
Matthew Duncan
Krista Eakins
Jared Engelberth
Michael Genovese
Nancy Hammel
Craig Hatfield
Josh Heber
Victoria Horton
Derek Hostetler
Katie Jones
Jeff Mason
Michael McCoy
Mark Moehling*

ABE Graduates

*Clay Mothershead
Sarah Rutkowski
Joshua Seidner
Jeremy Simpson
Joshua Smith
Tim Meier
Erin Rosswurm
Mary Jane Stine
Kyle Vester
Jeffrey Wojcicki
Matthew Wolf*



ABE Seniors Matthew Wolf, Tim Meier,
Janie Stine & Erin Rosswurm

Graduate Student Recognition and Awards

College of Engineering Outstanding Service Scholarship - Lindsay Birt & Mark Thomas
Purdue Student Engineering Foundation Outstanding Graduate Student Award - Aeraj ul Hague
Celebration of Graduate Student Teaching Honoree - Andrew “Dewey” Mann



Andrew “Dewey” Mann

Magoon Award Honoree - Kyle Bailey
2009 Chorafas Foundation Award - Jun Wang
Andrews Fellowship - Elizabeth Trybula
Bilsland Dissertation Fellowships - Jiji Chen & A.R.P. Kingsly
Lynn Fellowships - Jing Tan & Salah Issa
Purdue Doctoral Fellowship - Margaret McCahon
Ross Fellowships - Brittany Book & Jennifer Kahn
NSF Fellowship - Rebecca Logsdon

ABE Outstanding Students

Jeff Wojcicki - received the Purdue Student Engineering Foundation Outstanding ABE Senior Award! Jeff is active in Purdue Christian Campus House, Purdue Engineering Ambassadors, Engineering Honors Learning Community and Engineering Projects in Community Service (EPICS) where he conducted research for a “greener” home design for the local Habit for Humanity affiliate. Jeff recently returned from a trip to Kenya with the Purdue Global Engineering Program, where he helped install a water purification system.



Jeff Wojcicki

Senior - Mary Jane “Janie” Stine - Janie is well rounded and excels in every aspect of the college experience: coursework, research, leadership, oral and written communication, maturity/ethics, teamwork, and intellectual curiosity. Janie is a natural leader and innovator with an ability to translate ideas into reality. For example, she and her colleagues created an environmentally friendly premium toilet paper produced from solely soy or corn raw based materials. This innovation won the Indiana Corn Innovation contest earning \$10,000 in prize money, and earned 3rd place in the Indiana Soybean Innovation contest. Purdue is currently pursuing a patent application for environmentally friendly premium toilet paper that is produced from solely soy or corn based raw materials. Janie is one of three inventors on that patent. Several large manufacturers of toilet paper are pursuing possible licensing of the patent.



Janie Stine

Junior - Courtney McWaine - Courtney has demonstrated her academic ability by maintaining a 3.7 GPA in our ABE curriculum. Courtney remains highly involved in the campus community as shown by her extracurricular activities. She is involved in the Society of Women Engineers and Minorities in Engineering Program. Through these organizations she has demonstrated her leadership, communication, and interpersonal skills. Furthermore, Courtney’s experience through the cooperative education program with Bunge has helped her solidify her high level of commitment to the agriculture process industry.



Courtney McWaine

Sophomore - Molly Scherer - Molly’s 3.9 GPA performance has placed her near the top of her class. She displays a high degree of initiative and determination, and has a very wide range of interests with regards to biological materials. The Purdue Mortar Board awarded Molly the “Tip of the Cap Award” for outstanding student organizational leadership. Molly is active with Purdue Dance Marathon, Campus Crusade for Christ and the Emily Mauzy Vogel Sophomore Leadership Conference. Molly is currently working with ABE Assistant Professor Patrick Murphy on a project to reduce the cost of establishing Miscanthus, a bioenergy crop, by investigating relationships between physical and chemical properties of Miscanthus rhizomes and their viable after planting.



Molly Scherer

Freshman - Josue Ordaz - Josue is active with several campus organizations including, Mexican American Engineers and Scientists (MAES), Latino Culture Center Ambassadors (LCC) and Food Environmental Engineering and Life Science Program (FEELS). As a participant in the FEELS program, Josue attends seminars that help him develop his academic and leadership skills. This past fall he participated in the FEELS program’s “Walk for a Cause” fund raising event. Josue helped organize the LCC event celebrating a Mexican Tradition Day entitled “Day of the Day” that was held at the Lafayette YMCA. As a member of LCC’s committee on Health and Fitness, he also helped organize events to promote health and fitness including workout sessions and speakers. Recently Josue joined the MAES, a nationwide organization that seeks to promote and honor excellence in education and leadership among Latino engineers and scientists.



Josue Ordaz



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Micky Creech, Editor



<http://www.purdue.edu/abe>

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Purdue University

Purdue University is an equal access/equal opportunity university

MARK YOUR CALENDARS FOR FAMILY DAY AND HOMECOMING!

*Again this year the ABE
department will be hosting an
Open House for students,
faculty, staff, alumni, family
and friends during both
Family Day and
Homecoming!*

*Be sure to mark
your calendars -
Family Day is September 18th
(Purdue vs Ball State)
and
Homecoming is October 16th
(Purdue vs Minnesota)*

*see www.purdue.edu/ABE
for additional information!*

ABE Alumni!

We Want To Hear From You!

*We would like to keep in
touch with you about ABE
activities and events, as well
as other college and
department events, so be sure
you send your e-mail address
to Micky Creech at
mcreech@purdue.edu*

