

Purdue University

Agricultural & Biological ENGINEERING

From Department Head - Bernie Engel

Inside this issue:

Department Update

Student News

ABE Department News

ABE Outstanding Alumni

*Del Bottcher
Jason Shonk
Ernest Streicher
Edward Vondell*

ABE Outstanding Students

ABE Faculty & Staff News

ABE Alumni News

ABE Retirements

Professor Mack Strickland

PURDUE
UNIVERSITY

Our Mission

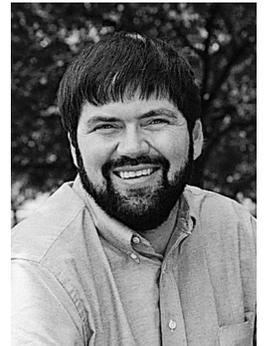
*“To prepare students, citizens,
and industry for the future
through innovative education
and extension/outreach
programs, and the discovery
of knowledge.”*

Alumni and Friends of ABE

We are well into the fall semester and it will be nearly over by the time you receive the newsletter. Undergraduate student numbers remain very strong and the opportunities for graduating students have never been better. Undergraduate students in our program have excelled in the classroom (pages 10 and 11) and in several national competitions this past year (see the ASABE ¼ Scale Tractor Student Design Competition story on page 2 and the National Basic Utility Vehicle story on page 3). We have an outstanding group of new graduate students this fall pushing our graduate student numbers above 80 - our highest enrollment ever.

This past spring we recognized four alums as ABE Outstanding Alumni. Those recognized were Del Bottcher with Soil and Water Engineering Technology, Inc., Jason Shonk with Case New Holland Global, Ernest Streicher with John Deere, and Edward Vondell with DaimlerChrysler. You can read more about this outstanding group on pages 6-9. This group spent a memorable day on campus and helped evaluate our senior design and capstone projects.

In January we welcomed Professor Indrajeet Chaubey to our faculty. He had previously been a faculty member at the University of Arkansas.



Bernie Engel

He brings significant expertise in the area of ecohydrology to our learning and discovery areas.

Professor Mack Strickland retired on June 30 following a distinguished career. Mack helped shape our Agricultural Systems Management program and taught numerous courses in this program over his tenure. We'll certainly miss his contributions.

If you'd like to follow the news within our programs on a more regular basis, you can do so by accessing our www page and checking out the ABE-notes linked there (www.purdue.edu/ABE).

Thank you for your continued support of our programs and go Boilers!

Competition

- After 9 months of long weekends and late nights, twenty Purdue Agricultural and Biological students were rewarded with several first place category finishes and a second place overall finish at the 2007 ASABE 1/4 Scale Tractor Student Design Competition, which was held May 31st through June 3rd in Peoria, Illinois.

Thirty universities from the United States and Canada participated in the event.

This was the highest overall finish ever recorded by Purdue (4th in 2005) and the first time that Purdue won the overall performance title.

Purdue took a “no holds barred” approach and was able to design and build a **six engine** tractor weighing less than 900 lbs, Purdue was the only school able to do this.

For Purdue this meant that over one-half the weight of the tractor was solely from the engines. To achieve this remarkable feat Purdue’s tractor utilized lightweight electric steering, electronic throttle control for each of the six engines, and an electric reverse gear using a starter motor from a Geo Metro automobile. A joystick and onboard computer is used to steer and operate the tractor, collect data, and maintain safe operation. The tractor will automatically send SMS messages to a cell phone if safe limits are exceeded, and a person can remotely disable the operation of the tractor by calling the cell phone located in the tractor computer.



2007 Quarter Scale Team

Faculty advisor for the team, Professor John Lumkes noted that “what the students achieved this year is remarkable. The results are a testimony to the quality and dedication of these students, their willingness to function as a team, listen to different opinions, and to overcome the many challenges brought on by designing and building the only six engine tractor at the competition.

The results speak for themselves with winning the overall pulling title. I am extremely proud of what they accomplished and am privileged to be able to see the students mature not only as outstanding engineers during their years at Purdue, but as young men and women excited to go out and become leaders in a world needing new ideas and new solutions to the energy, food, and water problems facing our society.”

Team members are: Keith Harmeyer, Michael Holland, John Mahrenholz, Cody McKinley, Josh Sander, Mitch Fenneman, John Andruch, Anna Weimer, Jon Owens, Ben Schlipf, Casey Fillinger, Keith Mears, Brandon Manier, Brad George, Brad Paulus, Andrew Crandel, Craig Clemson, Dusty Price, James Bartlett and Joe Dynes. Faculty advisor is Professor John Lumkes.



Purdue Pete & Quarter Scale Team Members at the Indiana State Fair



- On February 23rd - 24th, 12 ABE students traveled to Ames, Iowa for the 5th Annual ASABE Midwest Regional Rally. The Rally was held at Iowa State's campus. The group toured John Deere Des Moines Works, Barilla Pasta, and the City of Ames Garbage Facility, where trash was separated, melted, and sent over to the local power plant to be burnt for energy.

Departmental tours included Iowa State's Air Dispersion, Hydraulics, Engines, and Robotics labs. The groups also got a close up look at Iowa State's biomass harvester. Speakers for the weekend included ASABE President, Charles Sukup, Dr. Carl Bern (ISU Advisor), Dr. Raj Ramen, ISU College of Agriculture Associate Dean, Joe Colletti, and ISU College of Engineering Assistant Dean for Undergraduate Programs, Loren Zachary.

Purdue University was awarded the Mile Man Award for bringing the largest number of participants the furthest distance. Purdue's Keith Mears was elected into office as the 2007-2008 ASABE Midwest Regional Rally Secretary.

Purdue attendees included: Cody McKinley, Keith Mears, Brandon Manier, Michael Holland, John Mahrenholz, Joe Dynes, Joshua Sander, Trista Bailey, Joseph Neukum, Emily Raderer, Anna Weimer, and James Bartlett. They were joined by ABE alumni, Curt Elpers.



Purdue ASABE Members

- A team of six Purdue ASM and one ABE students did an outstanding job at the national BUUV (Basic Utility Vehicle) competition on April 27-28, 2007 in Zionsville, IN. They placed 3rd overall (receiving 77 points) and won Indy 500 qualifying race tickets for their effort; the first place team received 80 points. There were 8 competitors in Purdue's BUUV class. These students designed and built their BUUV within one semester. It had 10 hp and was built using the transmission, steering column, and rear axle of a scrapped Toyota Tercel. Their front wheel drive, front wheel steer vehicle with a 6 foot flatbed performed way beyond expectations in the hill climb. In a 90 minute endurance run, Purdue earned an unofficial 2nd place. In the agility (slalom) timed course, 39 seconds won; Purdue's BUUV was close at 41 seconds.

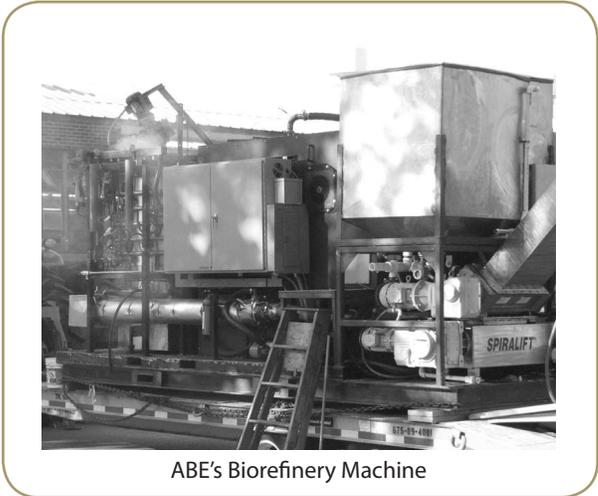
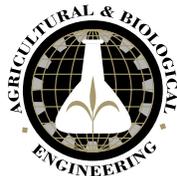
The Purdue ASM/ABE BUUV made it through an area of the mud pit which no other vehicles traversed and might have made it completely through the mud pit, but they were the last to go. Have you ever seen a thoroughly used and abused mud pit? Purdue tied for the shortest time to complete the obstacle course, with one stake "hit", and received 2nd place. Moguls were no problem. Purdue tied for 1st in the swamp crossing with two other teams which made it through the shallow area; the driveline slipped in the middle of the deep crossing and no other BUUV made it either. Only one projectile left the vehicle through the grueling day of extreme testing. There was a bent axle which came as a result of goodwill; a stuck truck was freed at lunch time. The Purdue BUUV still runs but is in need of washing. Congratulations to the team of Ryan Zook, Ryan Fisher, Jaret Wicker, Brian Gum, Josh Stoelting, Brandt Erwin, and Joe Leedy. Many thanks to advisor, Dr. John Lumkes.



In September several members of the U.S. military visited the Agricultural and Biological building on the Purdue campus. These military visitors came to see the ABE Biorefinery machine designed by Professor Michael Ladisch and Assistant Professor Nate Mosier in action.

The Biorefinery machine is a portable refinery that converts food, paper and plastic trash into electricity. This would allow soldiers in the field to convert waste into power and would eliminate any remnants of their visit.

The biorefinery processes several kinds of waste at once, which it converts into fuel via two parallel processes. The system then burns the fuels in a diesel engine which in turn powers a generator.



ABE's Biorefinery Machine

2006-2007 Faculty Recognition & Awards



Klein Ileleji in Juehnde, Germany

Klein Ileleji recently embarked on a trip with representatives from Indiana's BioTown, USA in Reynolds, Indiana and Indiana's State Department of Agriculture to Germany from September 17-22, 2007, to meet with residents of Bioenergy Village in Juehnde. Juehnde is Bioenergy Village, the German version of Indiana's very own BioTown, USA in Reynolds.

With nearly 750 residents, Juehnde is the first village in Germany to produce its complete heat and electricity supply from bioenergy. Klein was representing Purdue as part of the nine member delegation to learn from partners and stakeholders of the Bioenergy Village in Juehnde which included the Center of Sustainable Development at the University of Goettingen, German Agency for Renewable Resources (FNR) and the German Ministry for Food, Agriculture, and Consumer Protection (BMELV). Klein's class ABE591K - Biomass Feedstock Systems Engineering has been involved in two service learning projects with BioTown USA and he is a member of the Biotown Development Authority board. For more information on the trip, visit the daily blog at



Livestock farms that emit large quantities of air pollutants such as ammonia, hydrogen sulfide, particulate matter and volatile organic compounds may be subject to federal environmental regulations. However, accurate data on air emission rates from livestock production facilities are insufficient to enforce the laws and for producers to understand the quantity and dynamics of their emissions.

The Air Compliance Agreement was established to produce two years of high quality emission data from representative farms across the country, while providing producers more time to report their emissions and apply for air permits, if necessary. Nearly 2,700 producers signed up to participate, and the Agricultural Air Research Council (AARC), a non-profit organization funded by the pork, dairy, broiler and egg industries, was established to sponsor the required National Air Emissions Monitoring Study (NAEMS).

The NAEMS will provide the scientific data needed by the EPA to develop the models for estimating what farms require regulatory oversight, and by the livestock industries to develop mitigation strategies.



EPA Administrator Steven Johnson & Professor Al Heber

Purdue signed the contract with the AARC to conduct the NAEMS in December 2006.

ABE Professor Al Heber is leading the 2-year, \$14.6 million national study to measure livestock emissions of hydrogen sulfide, ammonia, particulate matter, and volatile organic compounds in collaboration with Agronomy Professor Rich Grant, ABE Research Professors Teng Lim and Jiqin Ni, and 11 professors from seven other universities. The EPA's Office of Air Quality Planning and Standards is supervising the study and demanding the documentation required by the level 1 quality assurance project plan so that the results can be credible, reliable and publishable.

Micromet methods for area sources are being used to estimate emissions from six swine manure storages, three dairy lagoons, and a dairy corral. Monitoring at area sources in Wisconsin, Indiana, Iowa, and Oklahoma was started this summer by Professor Grant's team.

Continuous monitoring of emissions and related variables began this summer at barn sites in California, Washington, Oklahoma, Iowa, Wisconsin, Indiana, North Carolina and New York. On-farm instrument shelters house the instrumentation for measuring emissions from barns at a broiler farm, three egg layer farms, five swine farms, and five dairies. Particulate matter is measured with a tapered element oscillating microbalance that provides real-time mass concentrations at

the barn exhaust fans. A multi-point gas sampling system draws samples from representative fans to the instrument shelter where they are analyzed continuously for ammonia, carbon dioxide, hydrogen sulfide, VOCs, and, at some sites, greenhouse gases.



Emission rates are determined by multiplying these concentrations by real-time airflow rates determined from static pressure measurements. Data is emailed at midnight to Purdue ABE for analysis the next day. Research personnel at each university visit the sites weekly for instrument maintenance and calibration.

On June 14, Professor Al Heber participated in a press conference with EPA Administrator Steven Johnson at the New York dairy site, officially announcing the monitoring phase of the NAEMS. The event was held at the New York State dairy site for NAEMS, and also featured Curt Gooch (the Cornell University PI for the site).

One of the highlights of the event was Dr. Johnson's visit inside the on-site instrument shelter, which was outfitted and customized by Purdue ABE. Dr. Johnson expressed interest in the real-time PM concentrations of exhaust air displayed on the computer. This led to some great discussion about the advantages of dynamic real-time data, the importance of collecting data on other barn operating parameters, and what can be learned from integrating and correlating the information.

Del Bottcher

Soil and Water Engineering Technology, Inc.
Gainesville, Florida

B.S. - Physics & Mathematics, University of South Florida, 1972

M.S. - Agricultural Engineering, University of Florida, 1974

PhD. - Agricultural Engineering, Purdue University, 1978

After graduation from Purdue University, Del was hired by the University of Florida (UF) where he spent fifteen years on the faculty developing research and extension programs focused on minimizing environmental impacts from agricultural operations. Del was presented the USDA Distinguished Service Award by the US Secretary of Agriculture for developing and gaining grower's participation in agricultural Best Management Practice (BMP) programs.

For the past few years, much of Del's work has involved completing technical advisements and model development for major water resource projects with multiple state and federal agencies. A lot of this work has focused on the development and implementation of the Watershed Assessment Model (WAM), which has now become the preferred model in Florida for watershed assessments and TMDL development.



Del Bottcher

"I can only think back to my days at Purdue with fond memories and gratitude and reflect on how fortunate I was to have been able to attend Purdue University".

Del co-founded Soil and Water Engineering Technology, Inc. (SWET) in 1986. In 1993, Del went full time with SWET, which is located in Gainesville, Florida, to specialize in agricultural water quality assessments, development of customized monitoring equipment for specialized sampling and monitoring needs, and comprehensive hydrologic/contaminant transport modeling.

SWET has recently partnered with ESRI, the largest GIS provider in the world, to develop a new ArcMap version of WAM, which is to be released nationally and internationally this summer.

Del indicated that the rigorous course work and technical training he received while attending Purdue University is what set the stage for his personal career and successes.

Del feels that what stands out the most from his Purdue experience was the mentorship and personal attention provided by the faculty in the Agricultural & Biological Engineering Department. In particular, Professor Ed Monke, who was Del's major professor and he continuously instilled a mindset of thoughtful reflection for approaching problems while Professor Larry Huggins showed that being on the cutting edge of technology, computers in particular, was going to be crucial to Del's future.

Del states "I can only think back to my days at Purdue with fond memories and gratitude and reflect on how fortunate I was to have been able to attend Purdue University".

Jason Shonk

Product Evaluation Manager for North American Crop Harvesting
CNH Global

New Holland, PA

B.S. - Ag Mechanization, Purdue University, 1987

M.S. - Agricultural & Biological Engineering, Purdue University, 1990

Jason has been with CaseIH and now CNH Global his entire career. He was responsible for CNH's AF Rotary combine line from its inception through development and marketing.

Jason is currently the Product Evaluation Manager for North American Crop Harvesting Products. The Product Evaluation Department supports new and current product development activities for CaseIH and New Holland branded combines and headers built and sold in North American and exported worldwide. The department also supports the CaseIH branded cotton harvester products.

The CNH Global mission is focused on new concept development, resolving current product performance and reliability issues, cost improvement and manufacturing quality.

Jason's department identifies program risks for launch of a product or component into manufacturing by evaluating component and integrated system performance, identifies component failures and determination root cause, and by collecting mission data for design concepts.

The department also tests products both independently and with their customers across the



Jason Shonk

US, Canada, Western Europe, Australia and Brazil.

Both of Jason's degrees are from the Agricultural & Biological Engineering department. Jason knows that these Purdue degrees have been very valuable in preparation for the early stages of his career.

Jason initially relied upon the technical education that the Agricultural Mechanization degree provided to be successful. In his more recent career stage, he has come to highly value the project management and soft skills training I received.

Jason is married to Lonnie and they have two children; Vanessa 6, and Timothy 3.



Jason Shonk and Dr. Bernie Engel



Ernest Streicher

Manager of Electronic Component Engineering
John Deere - Product Engineering Center
Waterloo, Iowa

B.S. - Agricultural Engineering, University of Illinois, 1977

M.S. - Agricultural Engineering, Purdue University, 1983

M.S. - Electrical Engineering, Purdue University, 1992

Ernie received a M.S. degree in Agricultural Engineering from Purdue in 1983, and took a position with TRW Transportation Electronics Division in Addison, Illinois where he designed hardware and software for electro-hydraulic three point hitch draft controls.

In 1985 Ernie took a Principal Engineer position with Cummins Electronics Company (a subsidiary of Cummins Engine Company) in Columbus, Indiana and for 11 years worked on electronic engine controls primarily in the design of the control modules. In 1995 Ernie became the Director of Product Engineering for all control module products, and was part of the first group started at Cummins to implement electronic engine controls.

In 1996, Ernie took a Project Engineering position at John Deere in Waterloo, Iowa and for the next 10 years he was part of Engine Engineering's Electronic Engine Controls for all of John Deere's engines.



Ernie Streicher

Ernie is currently Manager of Electrical and Electronic Component Engineering where he is responsible for managing the design and development of all the electrical and electronic components on John Deere large row crop tractors.

The Team leaders for the electronic modules group, harness design group, and sensor group report to him.

When asked about the benefits of his Purdue degree Ernie stated, "I benefited a great deal from the multi-disciplinary nature of the ABE degree. In my work I interact with many mechanical and agricultural engineers designing the mechanical portions of vehicles. I occasionally interact with customers using the agricultural equipment we manufacturer and by having the ABE background, I am in a better position to understand and respond to these groups need and concerns. This improves my productivity and helps me make better decisions."

Ernie is married to Jody. He has four children, Michael, Jess, Adam and Laura. Ernie is a member of SAE and ASABE, and is very active in his local community and church.

"I benefited a great deal from the multi-disciplinary nature of the ABE degree"



Ernie Streicher and Professor Gary Krutz



Edward Vondell

Director of Product Engineering & Quality

DaimlerChrysler

Mexico City, Mexico

B.S. - Agricultural Engineering, Purdue University, 1985

M.B.A. - University of Notre Dame, 2001

Ed is currently the Director of Product Engineering and Quality - Mexico, living in Mexico City. In this position Ed is responsible for homologation of products for Mexico and continuous engineering work for certain areas of corporate car and truck platforms.

Prior to holding this position, Ed was the Plant Manager of the Indiana Transmission Plant II located in Kokomo, Indiana. The Kokomo plant represents an investment of over \$455 million.

As Plant Manager, Ed was responsible for all aspects of the operation.

The Kokomo plant produces a Rear-Wheel Drive, Five Speed Automatic Transmission that is used in the popular Chrysler 300C, Dodge Charger and Magnum, Jeep Grand Cherokee and Jeep Commander.

The Indiana Transmission Plant II was awarded the DaimlerChrysler Operational Excellence Award for 2005 under Ed's leadership. This recognition was awarded to the plant because of the excellent safety, quality, and cost results in 2005.

The Kokomo plant began production in January 2003 and employs approximately 650 people.

When asked how his ABE degree helped him, Ed stated - "The ABE program helped me develop a solid problem solving mindset. Not only individual problem solving, but learning how to solve problems in a group setting. This has been valuable throughout my career."

Ed's future career plans are to eventually relocate to Auburn Hills Michigan to work on a vehicle platform team in Product Engineering or Product Manufacturing.

Ed has been married for 15 years to wife, Pilar and they have two daughters, Stephanie 11 and Michelle 9.



Edward Vondell

"The ABE program helped me develop a solid problem solving mindset. Not only individual problem solving, but learning how to solve problems in a group setting. This has been valuable throughout my career".



Edward Vondell and Department Head Bernie Engel



is
a native of South Bend, Indiana and majored in Biological and Food Process Engineering and Pharmaceutical Science.



Outstanding Senior
Chelsea Mohler

During her time at Purdue, Chelsea has been actively involved in Purdue Student Government, Mortar Board Senior Honor Society, Iron Key Senior Honor Society and the Women in Leadership Conference. Her interest in pharmaceuticals led her to participate in two internships at Eli Lilly & Company, where she is now employed full-time as a Process Engineer.



Outstanding Junior
John Schumm

is
from Tucson, Arizona and is enrolled in the department of Agricultural and Biological Engineering focusing in Biological and Food Process Engineering.

John works in the Laboratory of Renewable Resources Engineering and is participating in a number of research projects involving producing ethanol from cellulosic material. John is also the President of the newly formed Biological Engineering in Genetics Club (BEGC).

was born in Columbus, Indiana and grew up in the country with 3 siblings.

Erin has always enjoyed biology and chemistry and was excited to join the Agricultural and Biological Engineering department.

Currently she is participating in Purdue's Professional Practice Program and is working at Bunge on an enzymatic refining process.

In the future Erin hopes to work in R&D for a bio-tech or food company in the Midwest.



Outstanding Sophomore
Erin Rosswurm

- each received a prestigious National Science Foundation Graduate Research Fellowship Award. The National Science Foundation (NSF) aims to ensure the vitality of the human resource base of science, technology, engineering, and mathematics in the United States and to reinforce its diversity by offering approximately 1,000 graduate fellowships in this competition. The Graduate Research Fellowship provides three years of support for graduate study leading to research-based master's or doctoral degrees and is intended for students who are at the early stages of their graduate study. The Graduate Research Fellowship Program (GRFP) invests in graduate education for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of the National Science Foundation. Both Elizabeth and Janie will receive these 3-year fellowships to work on projects they outlined in their applications and both are committed to working with major professors in ABE – Elizabeth with Dr. Mosier and Janie with Dr. Maier.



from Sagamore Hills, Ohio is studying Food Process Engineering.

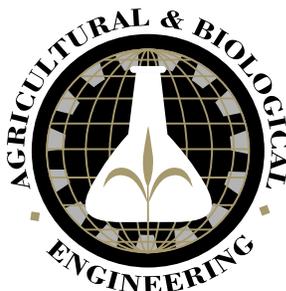
Over the summer Jamie worked with Kraft Foods in Purdue's Professional Practice Program.



Outstanding Freshman
Jamie Ho

Jamie has been active in the Society of Women Engineers, First Year Honors Engineering Program, and Honors Phone-a-thon.

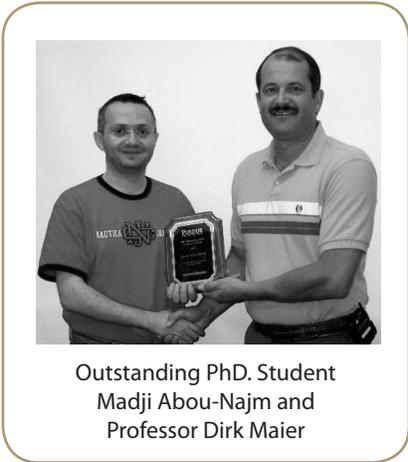
Jamie recently traveled to Quebec City, Canada with the University Honors Program, as well as traveling to New Orleans, Louisiana to participate in the Ultimate Spring Break Challenge, to help with rebuilding efforts and Hurricane Katrina relief.



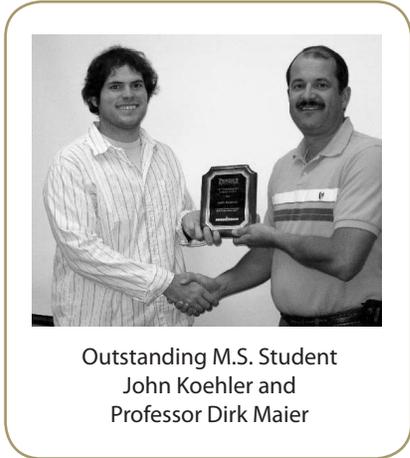
Majdi worked on various environmental engineering and regional planning projects in the Middle East and Africa before joining the ABE's PhD Program in August, 2005.

So far, he has completed most of his course work at ABE with a cumulative GPA of 4.0. He is currently working on a unique research involving theoretical development along with experimental data verification.

This work involves developing an interdisciplinary research on characterizing the cracking behavior of soils as well as the soil-water scaling problem. He has developed a new approach to assess the residual stresses in soils. An approach that is expected to have a major impact on understanding various stress related soil phenomena such as cracking and preferential flows that contribute to major water and water quality problems. As part of his research, he worked on developing a complete teaching module titled "Scaling in Hydrologic Processes" that was taught in different courses in ABE, AGRY, and FNR. It includes lecture material, lab assignment, and exam questions.



Outstanding PhD. Student
Madji Abou-Najm and
Professor Dirk Maier



Outstanding M.S. Student
John Koehler and
Professor Dirk Maier

John was born and raised in Ames, Iowa. He wanted to go to college out of state so he decided to go to Purdue University and eventually ended up majoring in ABE.

In 2006 he graduated with a bachelor's degree and enrolled in the B.S./M.S. dual degree program in the ABE department.

John has been conducting research on sol-gel biological materials with Professor Rickus since the summer of 2005.

His Master's project is on the development of a novel nitric oxide releasing surface.

In his free time away from school he enjoys all types of sports, watching movies, traveling, napping, and his newest hobby is golfing.

After graduation John has plans to work in the vaccine production department of Merck in Pennsylvania just outside of Philadelphia.



- was invited to give the junior investigator technology talk at the NIH Curing Epilepsy 2007 meeting.

This conference was a follow up to the 2000 White House Initiated symposium.

Dr. Rickus is one of only four junior investigators invited to give an oral presentation. The talks were broadcast via webcast around the world on the NIH Curing Epilepsy website.

joined the ABE department as Business Manager for the ABE Business Office.

participated in a panel discussion at the 2007 Agricultural Equipment

were featured in the article "Trash becomes electricity in portable multi-fuel biorefinery" in a issue of Inside

visited China, where he used GIS and GPS to investigate agricultural lands between the Great Wall of China and the Inner Mongolian Border.

testified in the Indiana Senate Chambers at a hearing on three bills concerning confined animal feeding.

participated in a meeting of the Hoosier Chapter of the Grain Elevator & Processing Society (GEAPS).

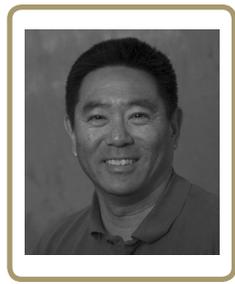
The meeting was hosted by The Andersons at their Clymers ethanol plant, which was under construction. A group of over 30 individuals got a sneak preview of the plant by touring it in late afternoon in frigid temperatures.

The \$135 million project will generate 110 million gallons of ethanol per year and about 300,000 tonnes of DDGS. The plant will employ about 40 people total and will be operated by four crews of 4 employees each. The Hoosier GEAPS Chapter is looking forward to another meeting and tour of the plant later this year

- accepted the invitation to serve as an editorial board member for a new open-access journal *The open analytical chemistry journal* which will be launched in 2007 by Bentham Science Publishers.

Leading journals include **Current Pharmaceutical Design** (Impact Factor 4.83) and **Current Medicinal Chemistry** (Impact Factor 4.90), the leading review journal in its field and endorsed by 7 Nobel Laureates.

has been confirmed as Vice-Chair of the SAE Fluid Power Committee.



was awarded the United Soybean Board Excellence Award for accomplishments in new uses for soybeans.

Bernie has helped develop a number of products and processes for utilizing soybean components in industrial applications

has recently been named a 2007 University Faculty Scholar.

Oswaldo joins Angus Murphy and Shawn Donkin in the College of Agriculture to receive this recognition.

are now under contract with Cambridge University Press to write a textbook entitled "The Engineering of Biological Sensing".

The book will be part of the Cambridge Texts in Biomedical Engineering series and will be targeted as a textbook for upper-level undergraduate and graduate level biological/ biomedical/interdisciplinary engineering courses as well as a resource for researchers working

has been promoted to Rank 5.



attended the National Farm Machinery Show and Tractor Pull at the Kentucky Exposition Center and saw many of our ABE alumni, current students and visited with numerous people interested in biofuels.

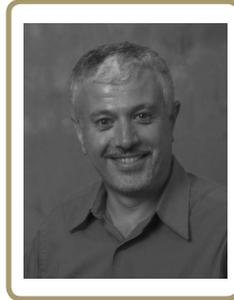
has been promoted to Full Professor.

- recently received the Nolan Mitchell Young Extension Workers Award from the American society of Agricultural and Biological Engineers (ASABE) at its annual meeting. This award is named after a crop drying pioneer; Nolan Mitchell, and recognizes "outstanding success in motivating people to acquire knowledge and skills for the understanding of agricultural operations.

received the 2007 New Holland Young Researcher Award, this award is given to an individual under the age of 40 at the time of selection and honors dedicated use of scientific methodology to seek out facts or principles significant to agricultural engineering.

Indrajeet has developed a multi-disciplinary and multi-institutional soil and water research program in the area of nonpoint source pollution and watershed modeling that has enabled numerous state and federal agencies to effectively address complex water quality problems at local, region and state levels.

- visited the University of Agricultural Sciences in Bangalore - which included discussions with their Vice Chancellor, deans, directors, and department heads.



Rabi along with several other professors discussed specific areas of their interest - water, sustainability and environmental issues, biotechnology/molecular biology, biofuels including ethanol/biodiesel, sandwich graduate programs; value added endeavors and economic development.

In the realm of biofuels, the state of Karnataka is investing significantly in each of three districts to enhance production of two species of oil bearing shrubs/trees (Jatropha, a new world species, and Pongamia).

Rabi and several of the group attended the water resource management workshop to develop the proposed AKI research and also to develop an international graduate program. The focus is not only on the technical aspects of water, but also the policy, political, sociological, and economic issues.

has been named a 2007-2008 Purdue University Wellness Ambassador.

participated in a press conference with EPA Administrator Steven Johnson, officially announcing the kickoff of the National Air Emissions Monitoring study. The event was held at the New York State dairy site for NAEMS, and also featured Curt Gooch (the Cornell University PI for the site) and Dirk Young (the dairy owner).

In addition to touring the facility and discussing the monitoring setup at the site, Professor Heber, Administrator Johnson and EPA Ag Liaison Jon Scholl took calls from several national media outlets, including NPR Radio, Reuters, and Energy and Ag.

was named an ASABE Fellow at the ASABE Annual International Meeting. The ASABE Fellow Award honors unusual professional distinction, outstanding and extraordinary qualifications and experience in agricultural engineering, and requires 20 years as a member, and 20 years of active practice.

Don was honored for outstanding contributions and achievement in extension, applied research and teaching in the area of agricultural structures and environmental systems. For more than thirty years, Don has specialized in the area of computer applications in agriculture and water resources and management, especially as applied to agricultural livestock, production systems and waste management. Don has served as an extension leader at Purdue and has developed a unique program in rural waste management that has provided service to the state of Indiana and to the profession.



was featured in RESOURCE magazine with an article titled "Cynamic Simulation". Nohoon is a staff engineer with the John Deere Product Engineering Center in Waterloo, Iowa.

received the Superior Paper Award at the 2007 ASABE Awards and

relocated to Georgia and accepted a position with ZF Industries as a Project Manager in the Off-Highway Division.

is currently in the Covidien training program, after completions he will be Regional Manager for the Ohio Region.

accepted a position with the DNR in Indianapolis and will be working with the Southern Basin Water Department.

has a new addition to the family - Tomas Bartosik was born in Mar del Plata, Argentina

was promoted to Senior Design Engineer with Caterpillar. He has been employed with Caterpillar since 2004 and spent two years on the WTS electrical team completing wiring and lighting designs for the Tier 3 WTS bill-of-material. He spent the last year as the sole member of the monitoring and controls system team, diagnosing system problems helping to define features of the Tier 4a NPRi programs, and increasing Cat's knowledge of machine monitoring.

received the 2006 ASCE Citizen Engineer Award from the committee on volunteer community Service. The award is presented to members of the American Society of Civil Engineers in recognition of their accomplishments in the area of public service.



Tomas Bartosik



ABE Professor Mohtar, Carly (ABE BS '07) & Gentry Sheets, Matt House (ABE BS '06), Joe Mallory (ABE BS '07) and Samia Mohtar

has joined IGT (International Gaming Technology) in Reno, Nevada

moved from Zimbabwe to Cape Town, South Africa where he is working on agricultural development projects.



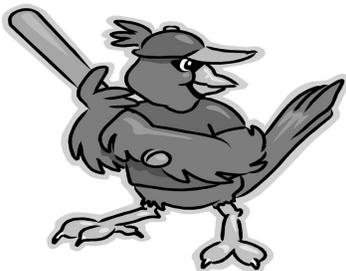
The American Society of Agricultural and Biological Engineers has named David W. Smith (ABE BS '67, MS '69), ASABE Fellow, the 2007 winner of one of its most prestigious awards, the Cyrus Hall McCormick-Jerome Increase Case Gold Medal Award. The award is given for exceptional and meritorious engineering achievement in agriculture and was presented at a recognition luncheon at the ASABE Centennial meeting in Minneapolis.

1907-2007



Recently retired from John Deere Moline Technology Innovation Center, Smith was selected for the award for his outstanding contributions to the application of the principles of dynamics for the analysis of off-road machines. An early user of multi-body dynamics software at Deere, Smith pioneered its application and expanded this technology in more than fifty unit support projects, including writing a general purpose subroutine for calculating the forces acting on off-road tires, structural load prediction for combines and lateral stability predictions for utility vehicles.

Smith has shared his technical knowledge through the authorship of five refereed publications and eight technical papers concerning off-road vehicle dynamics. He has authored chapters on dynamics in three off-road vehicle textbooks, and prepared and offered Continuing Professional Development Courses on multi-body and off-road vehicle dynamics.



- the Agricultural and Biological Engineering department hosted an alumni event on June 5th. ABE Alumni were invited to the Indianapolis Indian's baseball game complete with picnic before the game and group tickets. Everyone enjoyed a nice evening at the ball park and several youngsters received game balls to take home with them.

We hope all our alumni enjoyed this event and be sure that your contact information is correct, as the Agricultural and Biological Engineering department is planning several events for 2008 and we don't want any alumni to miss their invitation. Feel free to send your contact information to Micky Creech at mcreech@purdue.edu.

' Engineering Manager for Austin Technology Center, his group develops GPS receivers, guidance products and steering controllers as well as developing

' ,
' ,
purchased Wyatt Sales and Service Inc. (formally Wyatt Farm Center) located in Wyatt, Indiana.

' is Chief Engineer of the Commercial Marine business within the High Horsepower engineering organization at

' spoke at the John Deere Employee Development Conference in May, over 700 employees attended the conference.

we have established a new web page for our alumni that highlights job opportunities, check it out on the ABE web page

NOVEMBER

- 3 Purdue Football
vs Penn State (Away)
- 4 Daylight Savings Time Ends
- 10 Purdue Football
vs Michigan State (Home)
- 11 Veteran's Day
- 17 Purdue Football
vs Indiana (Away)
- 21 Student Thanksgiving Break Begins
- 22 University Holiday - Thanksgiving
- 23 University Holiday - Thanksgiving

DECEMBER

- 8 Fall Classes End
- 15 Fall Semester Ends
- 24 University Holiday - Christmas Eve
- 25 University Holiday - Christmas
- 31 University Holiday - New Year's Eve

JANUARY

- 1 University Holiday - New Year's Day
- 7 Spring Classes Begin
- 21 University Holiday - Martin Luther King, Jr.

FEBRUARY

- 2 Groundhog Day
- 12 Lincoln's Birthday
- 14 Valentine's Day
- 22 Washington's Birthday

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



After 32 years with Purdue University Professor Mack Strickland has retired.

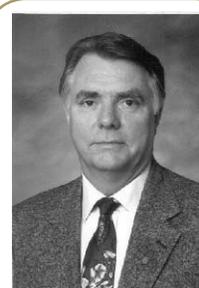
Mack received his B.S., M.S. and Ph.D. from Purdue University and began as an assistant professor with Ag Engineering in 1979.

Mack's major areas of teaching and research involved computer applications including programming, spreadsheets, computer-aided instruction, hardware and software selection and simulation.

Mack has authored 4 books, 4 workshop manuals, 65 technical papers, numerous popular press articles, and has made over 170 presentations at state, national, and international meetings dealing with various aspects of teaching, presentation techniques, and curriculum design.

Mack has received numerous awards including an Honorary American FFA Degree in 1991 and the National FFA VIP Award in 2000. He has been Outstanding Teacher and Outstanding Counselor in the ABE department each 6 times. He was the Outstanding Teacher for the School of Agriculture in 1998 and Outstanding Counselor for the School of Agriculture in 1999 and 2002.

We wish Mack the best of luck in retirement.



Mack Strickland



Published for
Alumni and
Friends of the
Department of
Agricultural and
Biological
Engineering

Purdue University
Agricultural & Biological Engineering Department
225 South University Street
West Lafayette, IN 47907-2093

Address Service Requested

Non-profit Organiza-
tion
U.S. Postage
PAID

Newsletter:
Micky Creech, Editor