

Kansas State University

Biological and Agricultural Engineering Newsletter—Fall 2009

Message from the Interim Department Head

BAE Department Head Position Announcement

- **Kansas State University invites nominations and applications for the position of Department Head in the Department of Biological and Agricultural Engineering**
- **Application screening begins February 15, 2010**
- **See Pages 15-16 for more details and contact information**

College of Engineering TELEFUND 2010

- **January 31 through February 4**

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The Department of Biological and Agricultural Engineering is a community of over 250 individuals at Kansas State University and includes more than 1,000 alumni and partners in other parts of North America and around the world. During this past year, I have had the privilege to discover the fervor of the students, support personnel and faculty as collectively we strive for excellence in fulfilling the land grant mission at Kansas State University. Excellence within the department comes only through a unified commitment to surpass minimum standards in academics, research, educational outreach and other endeavors in life. I've been privileged to often be the first to know of an award or honor to an individual or team within our BAE department. This 2009 BAE newsletter highlights areas of excellence, success and achievements. The individual and team achievements are the result of individuals who desire excellence and a willingness to go above and beyond the minimum re-

quirements. Our academic achievements are the direct result of the dedication of students, professionals, and faculty who work together while continuing to strive for excellence.

While serving as Interim Department Head, I have come to a greater appreciation of how vital our alumni and partners are in helping us excel in striving to bring solutions to improve the quality of life, conserve our natural resources and protect our environment. Thank you to our global community who have encouraged this excellence by partnering with us as friends, advisory council members, alumni and allied industry partners. You are greatly appreciated! The opportunities you have provided by engaging our young professionals in learning activities and financial assistance is critical to our continued excellence. You have helped by enhancing college experiences through interviews, internships, co-op experiences, critiquing projects and providing other types of lifelong learning



Dr. Joseph P. Harner III

opportunities. These supporting roles complement the classroom instruction and enable students to be better prepared for team experiences and career placement. Each opportunity serves as a reminder of the importance of developing and strengthening the relationship between our professional academic and global communities of alumni and friends. To all – a hearty thank you for helping us surpass the minimum in the past, for enabling us to excel in the present and for considering how you may help us strive for even greater excellence in the future.

Activities During Fall Semester

BAE Fall Alumni Event

BAE hosted our first fall alumni event prior to the homecoming football game on October 24 in Seaton Hall. This provided faculty and students an opportunity to become acquainted with BAE alumni and showcase some of our design team activities.

Alumni in attendance ranged from a 1959 graduate (first graduating class from Seaton Hall) to 2009 alumni. This is a tremendous opportunity for our 1,200 plus alumni to reconnect and rekindle friendships. Tentative plans are to host the 2010 event on the

first September football weekend. Any thoughts or ideas you would like to share to make this an ongoing annual event are welcome. If you would like to become involved in helping make preparations for the 2010 BAE alumni event or help sponsor, please contact Lou

Claassen at lkc@ksu.edu or 785-532-2901. Watch for more details and please begin to start making plans to attend even if you will not be on campus for the football game.

BAE Excellence Reception

The 2009 Biological and Agricultural Engineering Excellence Reception was held on Thursday, August 27. This reception acknowledged and recognized BAE students who excelled during the 2008-09 academic year and welcomed our incoming fresh-

men class. Over 120 students were recognized during this celebration event. It would be a privilege to have you and your family and friends join us in celebrating student excellence in August 2010 during the first week of classes.



BAE Graduate Students Sport Fest-2009

BAE's grad students held their 3rd annual Sports Fest at the KSU Rec Complex in September. Each team (composed of graduate students and 1 faculty member) competed in badminton, table tennis and volleyball. Four teams competed: Air Group, Bioenergy Group, Renewable Group, and Sensors Group. Winners were: Air Group-volleyball competition; Renewable

Group-table tennis and badminton competitions. "Overall Team Champion" winner was the Renewable Group.

Our graduate students held their bi-annual ice cream festival at Call Hall. This is an opportunity each semester to celebrate the accomplishments of our graduate students and congratulate those who completed their degrees during the semester.



Departmental Highlights—Undergraduate and Graduate Students

- 111 undergraduates enrolled in Biological Systems Engineering programs
- 82 undergraduates enrolled in Agricultural Technology Management program
- 15 Master's candidates in BAE, 7 of these candidates are enrolled in BS/MS dual degree program
- 16 Ph.D. candidates in BAE
- 7% of undergraduates are university premier scholars
- Robotics Team placed first in international competition. Members include: Alan Bauerly, Kelly Borgen, Martin Brack, Brett O'Connor, Andrew Osborn, Seth Perkins, Jay Reimer, Chris Siebenmorgen, DeeAnn-Rose Turpin, Brent Ware, Derek Wassom, Wei Han, Peng Li.
- 1/4-Scale Design Team placed second in international competition. Members include: David Becker, Michael Berggren, Andrew Brockelman, Nick Depenbusch, Douglas Grollmes, Matthew Grollmes, Denton Haag, Lloyd Dan Martin, Brett McClain, Mark Neeland, Josh Ogle, Clay Reinceke, Benjamin Ross, Jared Selland, Jared Unrau, Byron Yeager, Jonathan Zeller.
- Fountain Wars Team competed in international competition. Members include: Allie Archer, Lorinda Bejot, Rebecca Burns, Jessica Martin, Jeremy Meeks, Anthony Mignano, Ginger Pugh, Justine Sullivan, Brent Ware, Scott Wiens, Matthew Worcester.
- ATM Club received AEM Trophy for top student mechanization branch for third consecutive year.
- Second place finish was won by Emily Mangus in the K.K. Barnes International Student Paper Contest.
- Already 15 students have recently received offers for internships through University Career Fair.
- Recipient of 2009 ASABE Adams Student Scholarship is Lloyd Dan Martin.
- First place KWEA poster competition winner was Patrick Bussen; second place winners were Chris Kliewer, Scott Wiens, Craig Stockebrand, Chris Siebenmorgen.
- KWEA Student Scholarship awardees are Katie Handley and Jeremy Meeks.
- 5 BAE/BSE graduates are pursuing advanced degrees in the medical field

Departmental Highlights—Faculty and Staff

- Recipients of the College of Engineering awards were: Dr. Ronaldo Maghirang (teaching), Dr. Donghai Wang (research), Dr. Danny Rogers (service).
- 3 of the 7 lead journal editors for our professional society are BAE faculty members.
- One BAE faculty member is the chair elected of the largest division within ASABE.
- Dr. Joseph Harner received the ASABE Henry Giese Structures and Environment Award and Engineer-of-the-Year Award from Mid-Central ASABE Section.
- The 2 patents received by the College of Engineering were result of the efforts of BAE faculty members: Dr. Donghai Wang and Dr. Robert Wolf.
- Drs. Phil Barnes and Randy Price received Blue Ribbon Awards for outstanding educational aids.
- Dr. Robert Wolf was elected as American Association of Pesticide Safety Educators Fellow.
- BAE graduate program is ranked 16th among peers in *U.S. World News and Report*.
- Faculty members Drs. Kyle Douglas-Mankin, Stacy Hutchinson, Phil Barnes and Joe Harner were part of a team receiving the USDA CSREES Partnership Award for Mission Integration.
- Receiving a Presidential Citation for his service as Treasurer of the ASABE Foundation was Dr. James Koelliker.
- Judy Willingham, Extension Associate, received the President's Special Recognition Award at the Kansas Environmental Health Association Conference.
- Staff members receiving the College of Engineering *Above and Beyond Award* were: Cindy Casper, Lou Ann Claassen, Kerri Ebert, Randy Erickson, Barb Moore, Darrell Oard, Edna Razote, Aleksey Sheshukov
- WESP *Making A Difference Award* recipients were: Ronaldo Maghirang, Wenqiao Yuan, Naiqian Zhang and Barb Moore.



Undergraduate Experiences—2009

Engineers Without Borders—DeeAnn Turpin

Arriving at K-State as a freshman, I had many expectations and plans for the future, but I was not expecting to become the project leader for Engineers Without Borders (EWB). I traveled to India in March 2009 to assess possible sites for implementing rain-water harvesting. Three other K-State students assessed sites for solar street lamps and solar fig dehydrator projects. Since my return to KSU, I have had the opportunity to lead meetings and explore possible design solutions. The greatest benefit about my involvement in EWB is my engineering skills have been challenged. I'm seek-

ing to applying concepts learned through classroom experiences to solving a need in the village of Jaspur. For instance, while in India and developing design concepts I realized the budget, labor, and resource constraints that must be considered in developing solutions. However, because of this experience, I have been thinking of solutions that are 100% sustainable and I have moved away from the conventional methods of engineering. This has led to a tremendous amount of creativity involved in the project and it is phenomenal, because there is no book that I can turn to the back for the correct answer; the answer

is one that truly requires me to design and test different ideas. Currently, I am leading a team of K-State students and working with students from an institute in India and Iowa State. We are collaborating on ideas to test and maintaining contact with the villagers in Jaspur. One design that we are testing is 100% sustainable. The design utilizes trash from the surrounding area and compacted earth. Gravity is used to transport water from the storage tank to the local houses.

If you have any questions regarding any of our India projects or would like to learn more about the KSU-EWB chapter, please contact me, DeeAnn Turpin, at turpind@ksu.edu. I will be happy to share with you how you may partner with us and support opportunities such as mine to help undergraduates excel. Thank you very much!



Study Abroad Program—Robert Clark

Ever wondered about Studying Abroad? At first the thought of it, to me, sounded like a lot of work and extra effort on my part. I kept saying "Well, in engineering there's really just no time" or "The classes would never transfer." I was wrong on both accounts; Study Abroad may have been one of my best decisions.

Last semester (Spring 2009) I studied abroad in Monterrey, Mexico at the school of ITESM.

ITESM is a great school, especially for engineering. Being one of the top ranked schools in Mexico, ITESM is a popular school for Study Abroad. I heard of this program through my sister who studied there about 2 years before I did, so I knew a bit of insider information. Upon arriving at ITESM I was astounded; the University was fairly large, but contained some impressively giant buildings. The first week there I went through orientation where I picked out my

semester schedule, learned what the campus had to offer, and started on my VISA application process. Throughout the semester I only had classes on Tuesdays and Thursdays, which provided me the opportunity to travel any weekend I wanted without problems.

Traveling through Mexico was a blast. I was able to experience more culture than ever before, meet many new people, and have a lot of fun. I took many trips around Mexico including:

Mexico City, Xochimilco, Veracruz, Puerto Vallarta, Guadalajara, Guanajuato, Dolores Hidalgo, and San Miguel de Allende. I also got to see many interesting places such as: Teotihuacan (ancient ruins), La Basilica de Guadalupe (a famous basilica where there is a recorded sighting of the Virgin Mary), and Teatro Juarez (a theatre built a long time ago that is very elaborate with much history behind it). My favorite trip, however, was during our spring break called "Semana

Study Abroad Program—Robert Clark (continued)

Santa" or Holy Week. During this week I went to Guadalajara and Guanajuato, the epicenter of the Mexican Revolution. Among seeing/touring where certain pivotal points in the revolution were, the cities themselves were beautiful. Guanajuato is a city mainly made up of ally ways all over the place with very few actual driving streets, not to mention the extremely

colorful buildings and houses.

While everything went well for me, Mexico isn't without its share of problems. However, it's all part of the entire experience, and as long as you are a law-abiding citizen, like in the U.S., all will go well. Overall my semester was a great experience and I wouldn't trade it for any-

thing. I also would encourage anyone thinking about studying abroad to do so, contact our Study Abroad Office in Fairchild Hall and they'll set you up and get you on your way. "The World is a book, and those who don't travel only read the first page."



Research Project—Emily Mangus

During the summer of 2008, I conducted a research project in the BAE department as part of the engineering honors program at K-State. The purpose of this research was to determine the feasibility of using two different types of poplar trees being used for environmental control as a biofuel source. This particular project was much larger and more complicated than previous research projects I completed so I was quite overwhelmed at first. Although I received help from fellow researchers for most of the labor intensive portions of the project, I conducted several portions independently. Throughout the fall of 2008, I worked on completing the research as well as writing a research paper on the project. I submitted my final paper into the K.K. Barnes Student Pa-

per Competition, and to my surprise it was selected as one of the top three finalists. I was then invited to present my research in the oral part of the competition at the International ASABE conference in Reno, NV and I received 2nd place.

The 2009 ASABE conference was my first conference experience,

which I treasure because it was very enjoyable to learn about what was going on in the research community and tour the Reno area. Also, I found that I immensely enjoy giving presentations because I can communicate to others my passion and excitement for the research project, as well as the significance of

the research itself. This experience was in fact priceless to me because I further developed my independent research skills as well as my communication skills, which truly inspired and prepared me for graduate work and further research.

From Left to Right: Chris Kliwer, Allie Archer, and Emily Mangus. We spent several days sorting every leaf and twig from select trees into large paper bags in order to complete a moisture analysis on the trees. Although this was long and tedious work, we still managed to have a little fun.



Importance of Internships—Dr. John Slocombe

ATM students at K-State appreciate the rich experiences they obtain from high quality summer internships. It has been said for years, "Internships are a win-win situation for the student and the employer." This could not be truer today! An internship experience enables the student and employer to

evaluate each other for three months in terms of future employment. A high percentage of students completing internships results in a career position after the student receives their college degree. Below are highlights from the internships the ATM students experienced in 2009. The students arranged for the internship, establish the

objectives of the internship with the employer, and are evaluated twice during the three-month experience by the employer. When students return to K-State, they share those experiences via presentations with faculty and students in monthly ATM Club meetings. This process has assisted many graduates in securing employment in their chosen career path. On behalf of the Department of Biological and Agricultural Engineering, thanks to all our friends and alumni for working with our outstanding students...we are truly blessed with outstanding students at Kansas State University.



BAE MOTTO: "We Bring Solutions to Life"

Ryan Mathewson at Helena Chemical, Centralia, KS

As a summer sales and marketing intern with Helena Chemical I gained a wide range of knowledge and experience. Traveling through southeast Nebraska and northeast Kansas I set out to promote and sell Helena's crop production products. I learned a lot about crops and how different chemicals work with crops. I was able to make direct sales calls to farmers and crop production retailers after the training provided by Helena on crop and sales.

The agronomy classes I took really prepared me for this internship, however, the most important course training came from speech and communication classes. I discovered I was continually in communication (talking and presentations) with clients. An internship is a great way to learn, get experience, and make contacts. Many fields of work involve some form of selling, so the best way to gain experience during college is to spend a summer in a sales

position. Your communications skills will improve during the experience. After college I plan on pursuing a career in some sort of agricultural sales.



Tim Wright at John Deere Company, Dallas, TX

During the summer of 2009 I had the privilege of interning with John Deere Company as a Customer Support Intern. I worked out of the Dallas Sales Branch office.

The project I worked on over the summer dealt with John Deere's customer satisfaction website and surveys. I trained dealers on how to access, interpret,

and utilize information from the website and surveys. The 38 dealerships I visited were located throughout Texas, Oklahoma, Arkansas, and Lou-

isiana. I trained 62 dealers throughout my summer travels. I learned a great deal about John Deere, its dealer organizations, and how they work together. I got a chance

Tim Wright at John Deere Company, Dallas, TX (continued)

to see John Deere from both a John Deere Company point of view and a John Deere dealership's point of view. The courses I have taken that prepared me for my internship were in agricultural economics courses. These classes prepared me for the spreadsheets and data analysis I was involved with on a daily basis. Other classes that have helped me were my communications classes. I communicated with differ-

ent dealer managers on a daily basis. For undergraduates, I would highly recommend completing at least one internship. I would also encourage companies to hire more interns as a freshmen or sophomore to provide undergraduates more opportunities explore the potential career choices. This also would enable us to discover early our career interest and select appropriate electives.

My plans for the future are to graduate in May 2010. I am in the process of looking for full-time employment with a John Deere dealership or other agri-business close to my home, so I can also do some part-time farming.



Barrett Smith at Kansas Potatoes LTD., Trousdale, KS

What a summer. It was quite an experience working for Kansas Potatoes again. This summer I had the opportunity to work on my management skills. I worked in many capacities during the summer. I helped with irrigation, wheat harvest and potato harvest. My main objective was to improve my management and marketing skills. I attained a greater appreciation of what it takes to manage other people, I had to be comfortable working with people at all

points in the operation, from fork lift driver to potato sorter to secretary. It is a true learning experience to learn to be more than just "labor". Most of my courses helped me, but specifically communications classes, English I, English II, and Speech all played a vital role in my work and communication this summer. I plan on finishing school in May of 2011. I currently plan on going home this summer and working in partnership with Heartland Irrigation on sub-surface drip irrigation pro-

jects this summer and eventually working with them to become a professional installer for Neta-Fim Irrigation, Heartland's tape supplier.



Jared Unrau at AGCO Corporation, Hesston, KS

This summer I had the opportunity to work as a Field Test Engineer Intern for AGCO Corporation in Hesston, Kansas.

During my time at AGCO my goal was to find out if I really wanted to be a Field Test Engineer or if I needed to look for a different ca-

reer. It was also a good way for me to get my foot in the door with a large manufacturing company and gain experience. Coming from a farming

background and going into a large corporate atmosphere was a big change for me to get use to. There were parts I liked and others I disliked, but that

Jared Unrau at AGCO Corporation, Hesston, KS (continued)

is the way it is with anything new. Through my experience I learned that working with machinery and being a test engineer is really what I want to do. I thought that I wanted to return home to the farm immediately after I graduated, but this opened my eyes to the possibilities that are out there. I would suggest alumni and companies to encourage students who are planning on returning to family business to do at least one internship and

have that experience. While the company may not be able to eventually hire the student, they will have provided a life long learning opportunity. The class I feel that has helped me the most is BAE 350. I would recommend to anyone looking about going into the industry that you try to get an internship as freshmen and sophomores. Do not wait to get one until your junior or senior



years. I will be graduating in May and would like to be a field test engineer. My long-term goal is to return home to the family farm. I truly enjoyed working for AGCO this summer and would like to return there.

Brian Lauer at PrairieLand Partners, Inc., McPherson, KS

I mainly wanted to gain infield experience with John Deere equipment and learn how to deal with customers as well as learn the inner structure of a dealership. I also wanted to gain contacts in the industry to further help my chances of obtaining a job upon graduation.

I learned many things this summer, so it's hard to sum it up into two sentences. I learned the overall structure and inner works of a dealership and how all departments work together. I also learned a lot about Deere products and improved my customer relations skills and saw how dealership employees handled different situations.

The precision agriculture classes helped be-

cause it gave me a foundation for the AMS side. The general business courses such as management, marketing, economics, etc. really helped just because it opens your eyes as to how the world works and it was good to see it in action in a real world setting.

My mistake was that I did not start intern-ing sooner. I had a great experience this past summer and only wish I had one more summer to try to get an internship with Deere and Co. I would recommend that students set up internships in different areas to help them find what they like best, and the more contacts you have the better. I would like to see com-

panies provide an internship at a dealership during the first summer and a corporate related experience the following summer. That would be great.

My plans for the future are still undecided at this point. It is nice to already have a pending offer from PrairieLand. I'm also considering pursuing a graduate degree.



Brent Kvasnicka at AGCO Texas-South Dakota

My objective for the summer was to meet new friends and learn as much as possible about combine support while traveling on the Techvan. My experience on the Techvan really improved my communication skills and allowed me to converse with customers every day. I also enhanced my mechanical and technological skills on the Gleaner, Massey, and Challenger combines. The course that helped me the most for this internship is

ATM 450 Sensors and Controls. I was required to trace wiring diagrams to pinpoint electrical issues and understand hydraulic flow to solve technical problems. I strongly recommend students to engage in a summer internship and start early in their undergraduate program. The knowledge and experience you will gain from an internship will be worth all the inter-

views and hard work. I plan to work for AGCO Corporation upon graduation.



Jonathan Schmidt at Bartlett Grain Co., Wichita, KS

I worked for Bartlett Grain Co. in Wichita, Kansas as a Grain Operations Summer Intern. My objective was to learn grain grading and how grades influence the grain shipped to the gulf while developing a working knowledge of a grain terminal. I learned how to manage inbound trucks and railcars to maximize protein and grain grades for outbound ship-

ments. I learned how to organize and schedule employees to complete day-to-day tasks to keep the terminal running smoothly. Management 420 helped me out by giving me of the insight on how to work well with others in daily operations. I would recommend each alumni provide internships

so undergraduates are able to explore the opportunities available within the Ag industry. Our major is very broad and encompasses a variety of careers that are significantly different from each other. After graduation I will be a Site Operations Manager for COOP dealing with grain, seed sales, and fertilizer recommendations.



Life on Sabbatical—Dr. Stacy Hutchinson

On August 31, 2009, my family and I embarked on an adventure of a lifetime, nine months of living, working, and studying in Toulouse, France. Shawn, an associate professor of Geography at K-State, and I are working at Ecole Supérieure d'Agriculture de Purpan, or just Purpan for short. Our children, Mitchell (age 8) and Marleigh (age 6) are attending French public elementary school. Over the next 9 months, we hope to enhance our understanding of the French education system, increase our knowledge of international natural resource management, and experience France to the fullest with at least a little bit of Europe thrown in for fun!

Toulouse is located in south central France along the Garonne River. With a city population of approximately 500,000 and an urban area population of approximately 1,000,000, it is the fifth largest population center in the country. Our apartment (all 600 ft²!) is located in the St. Cyprien neighborhood, which is just across the river from downtown. It is a wonderful area with a green market, several boulangeries (bakeries), a couple of grocery stores, lots of restaurants and a great park, "Prairie des Filtes", where the kids can run and play (we are thankful for the green space since our apartment is

surrounded with concrete and asphalt!).

Shawn and I are part of the Remote Sensing and Territorial Management Laboratory which is headed by Dr. Michel Gay, who is hosting us on our sabbatical stay. Shawn is assisting Michel Gay on the GEOWine Project, which seeks to quantify the impact of place on the quality of wine production (i.e., terroir). I am working on the Trans-Polar project with Jean-Phillipe Denux and the French equivalent of the U.S. Geological Survey that is assessing the type and magnitude of groundwater pollution in an agricultural watershed south of Toulouse. In addition to these research projects, we will also do a bit of teaching at Purpan, including English language classes (scientific discussions with Purpan students in English and familiarizing students to typical U.S. style lecturing) and guest lectures in natural resource management, general agriculture, and GIS courses. I am also involved with the joint KSU-Purpan Agricultural Resources and Environmental Management (AREM) program, which includes a capstone course this fall. Besides these duties at Purpan, we are also working on several ongoing projects at Kansas State

University and are working on several manuscripts for publication.

Mitchell and Marleigh are attending école primaire (elementary school) at Etienne Billeries. They are currently in the same classroom, called CLIN (no idea what this acronym stands for). This is a special class for foreign children to teach them the French language and style of teaching. As they learn French, they will be integrated into normal first grade (Marleigh) and third grade (Mitch) classrooms. The kids' school day starts at 8:45 a.m., they have a lunch break from 11:30 to 1:30 p.m., and the school day ends at 4:20 p.m. Thankfully for working parents like Shawn and me, there is a lunch and after school program sponsored by the city. The kids are not as thankful for this program as they do not care much for the food served at lunch!

Over the last three months, practically everyday has presented a new challenge and/or adventure. Many of these lessons were the result of living in a foreign country, many of them were the result of living in a large city, and some were, well, just life. By far the biggest challenge we face is communication. Before coming to France, Shawn and I took French I at K-State and I purchased a cou-

ple of language programs that we also studied on either the computer or the Nintendo DS. But, none of us took it too seriously, as I think we all thought everyone would speak at least a little English. Well... in France, they speak French! At work this is not too much of an issue since most of our colleagues at Purpan speak English. However, the kids are not as fortunate, as most of the teachers and almost all of the kids their age do not speak any English. And, every trip to the grocery, bank, library, city government, prefecture (national government office), doctor, hospital, restaurant, etc., quickly becomes an interesting mix of our poor French, hopefully a little bit of English, lots of hand gestures, and many times living with the consequences of not being able to communicate our needs. Generally, I am able to find some humor in these situations and depart promising to learn more French. For me, the most difficult times are when I am at professional meetings conducted in French. It is pretty difficult to convey your expertise in an area when you struggle to introduce yourself to the rest of the people at the meeting. For these reasons,



Life on Sabbatical—Dr. Stacy Hutchinson (continued)

I will never again assume that I will be understood because I speak English and I will continue to encourage Mitch and Marleigh to become fluent in at least one additional language.

Both Shawn and I are enjoying our work at Purpan. It is very interesting to see the different environmental concerns, the different approaches to environmental management, and the different environmental standards/regulations. As part of the Trans-Polar project, I have been working to develop management practices for protecting and improving groundwater resources in one of the regions that supplies Toulouse with drinking water. I was amazed to learn that the drinking water standard for nitrate is 50 mg/L... five times greater than the U.S.! Much of this is a result of the lack of

space for waste management (we have witnessed thousands and thousands of gallons of liquid manure application on very green fields) and some a difference in beliefs about crop nutrient requirements.

But, it does make me think twice about drinking the "potable" water from the tap!

One of Shawn's favorite differences related to environmental issues is carbon emissions. One of the great selling factors for cars is low carbon emissions. Many, if not most, billboards advertising cars emphasize the carbon emissions of the vehicle. Even the car rental websites provide carbon emission information to help you select your rental car. On average, carbon emissions are low and gas mileage high because the cars are very small (a Toyota

Prius is a relatively large car!). We have purchased a Citroën saxo for traveling around the countryside. The saxo is capable of transporting all four of us with one medium sized suitcase, but no more. It is a bit of a down size from our quad cab Dodge Ram 1500!

One of the goals for my sabbatical is to develop a better understanding of the French engineering education system so I can assist with enhancing our students' interaction with France, in general, and Purpan, in particular. The curriculum, particularly the timing and course structure, are very different than engineering at K-State. Because they do not follow a semester based course structure, we will have to be creative in how we craft our joint teaching programs and student exchanges.

Additionally, we must work with the French to offer more courses in English to enhance our students' ability to participate.

Over the next six months, I am sure we will continue to have challenges, make new discoveries and enjoy great experiences in France. If you want to keep track of us and see a few photos, Shawn is doing a great job of documenting our daily adventures on the family blog (www.shawnhutchinson.blogspot.com). And, every now and then we get the kids to jot down their thoughts on their own blogs (hot linked from Shawn's). I know we will all be glad to come home to Kansas next year, but for now we are happy accumulating more memories and looking forward to more adventures in Europe.



In Memory

Dr. Charles (Ken) Spillman passed away on April 22, 2009. Dr. Spillman served at K-State's Department of Agricultural Engineering for 34 years in various capacities including De-

partment Head, Professor and researcher; and retired in 2003. He served as director of the Structures division of ASABE Mid-Central, was named Kansas Engineer of the Year, won the

ASABE Metal Building Manufacturing Association Award, elected to grade of Fellow in ASABE and wrote many successful research projects including use of solar energy for animal shel-

ters. In 2008 he received the Agricultural & Biological Engineering Outstanding Alumni Award from Purdue University.

Professor Paul Stevenson passed away on December 4, 2009 at the age of 90. He joined the Agriculture Engineering Depart-

ment in 1957. He taught classes in Agricultural Mechanization until he retired in 1984. During his tenure at K-State Paul was a member of Phi Kappa Phi and was instru-

mental in establishing the Collegiate FFA. He was an honorary member of the Collegiate and K-State FFA as well as receiving the Honorary American Farmer Degree. He

was also a member of the American Vocational Association and the Kansas Vocational Agricultural Teacher Association.

BAE 2009 Graduates

Doctorate

Spring 2009

Jonathan Aguilar
Laguna, Philippines
(Dr. Koelliker)

Philip Woodford
Manhattan, KS
(Dr. Koelliker)

Summer 2009

Ravikumar Choodegowda
Kanakapura, India
(Dr. Koelliker)

Yali Zhang
Guangzhou, China
(Dr. Zhang)

Fall 2009—Ph.D.

Josephine Boac
Bataan, Philippines
(Dr. Maghirang)

Ming-Chieh Lee
Taipei, Taiwan
(Dr. Douglas-Mankin)

Master's of Science

Spring 2009

Ning Tang
Beijing, China
(Dr. Zhang)

Summer 2009

Ming Hu
Beijing, China
(Dr. Yuan)

Liman Liu
Harbin, China
(Dr. Wang)

Fall 2009

Henry Bonifacio
Quezon City, Philippines
(Dr. Maghirang)

Patrick Bussen (BS/MS)
Wallace, KS
(Dr. Hutchinson)

Leidy Peña
Medellin, Colombia
(Dr. Wang)

Sarah Shultz (BS/MS)
Overland Park, KS
(Dr. Zhang)

BAE/BSE B.S.

Spring 2009

Martin Brack, *Albert, KS*

Ashley Clark, *Manhattan, KS*

Cory Friedli, *Hope, KS*

Christopher Kliever
Dodge City, KS

Kevin Kohls, *Clearwater, KS*

Jessica Martin, *Coffeyville, KS*

Brett O'Connor, *Altamont, KS*

Justin Petry, *Milford, KS*

Christopher Potenski,
Clearwater, KS

Jacob Powell, *Manhattan, KS*

Jessica Rogers, *Manhattan, KS*

Ashleigh Steckly,
Overland Park, KS

Derek Wassom, *Wamego, KS*

Fall 2009

Matthew Grollmes, *Circleville, KS*

Andrew Osborn, *Baldwin City, KS*

Jay Reimer, *Beatrice, NE*

Tom Robison, *Edna, KS*

Craig Stockebrand, *Yates Center, KS*

Erik Thorsell, *Chanute, KS*

ATM B.S.

Spring 2009

Daniel Atkisson, *Stockton, KS*

Alan Bauerly, *Tonganoxie, KS*

Kevin Hamilton, *Newton, KS*

Cody Hill, *Holton, KS*

Jonathan Ireland,
Yates Center, KS

Jeremy Olson, *Hiawatha, KS*

Justin Schultze, *Waldo, KS*

Summer 2009

Justin Weseloh, *Yates Center, KS*

Fall 2009

Jonathan Born, *Lebo, KS*

Ryan Herder, *Humboldt, KS*

Brian Lauer, *Westmoreland, KS*

Derick McGhee, *Westphalia, KS*

Benjamin Norris, *Wellington, KS*

Jonathan Schmidt,
Minneapolis, KS

Matthew Shephard, *Pomona, KS*

Fall 2009 Enrollment Numbers

There are 111 undergraduate students enrolled in the Biological Engineering Systems degree program and 82 undergraduates enrolled in the Agricultural Technology Management program. During 2009, 21 graduated with a BAE/BSE degree and 15 with an ATM degree. The incoming freshmen class, including transfer students, included 37 new students in the BSE program and 25 new students in

ATM. Enrollment in both degree programs has increased compared to the 2008 data. The BAE/BSE enrollment has increased by 4%, ATM increased by 30%.

The BAE graduate program currently has 31 graduate students with 16 working on their PhD and 15 working on their master's. Six PhD candidates and 7 MS candidates completed their degrees in 2009. The concurrent BS/MS program initiated in 2008 has resulted in 7 undergraduate students continuing their

education. This dual degree program allows undergraduates during their senior year to begin working on their MS degree with some classes being used for dual credit. These students are able to complete their MS degree within a year of completing their BS degree. Our first dual degree students will graduate in December 2009.



Strengthening Partnerships

The Interim Department Head, Dr. Joe Harner, enjoys from his years of extension activities a change of scenery and landscape. He's trying to arrange 4 to 6 trips prior to June 2010 to

learn more about how we may work together to develop and strengthen our academic and global communities. Please let him know if you would like for him to visit your place of employment and discuss

opportunities to strengthen our professional relationships. Dr. Harner may be reached by e-mail at jharner@ksu.edu or 785-532-2900.



Special Thanks

A special thanks to those who have contributed financial support. Gifts from individuals, families, and corporate partners are vital in supporting the scholarships and the activities of our students. We have been impacted by the economy as 25 % percent less stu-

dents are receiving scholarship support during the current academic year. We are stretching resources to provide additional employment opportunities for more students. Thank you for the financial and in-kind support many of you provide directly to our design teams and

may not be listed below. Each team raises over 50 % of their own support—so your support is great appreciated. THANK YOU !

We would ask you seriously consider helping our programs by supporting the BAE Academy. The follow-

ing page provides more information on how to make contributions to the Academy. Gifts of any amount are truly appreciated. Your gift can be directed to a specific team, scholarship, or to the general department fund. Thank you all for your support, and Best Wishes for 2010.

Honor Roll of Giving: July 1, 2008—June 30, 2009

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YES, I want to help support the Department of Biological and Agricultural Engineering at Kansas State University. Enclosed, please find my gift for...

BAE ACADEMY Levels of Giving

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DEPARTMENTAL SUPPORT

I would like to support the department with a gift of \$ _____

If you would like to designate a specific use category, please check one or more of the following:

____ Agricultural Engineering Enhancement #I15300 \$ _____

____ BAE Student Design Teams #D17905:

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____ Robotics Team \$ _____

Please make your tax deductible check out to: KSU Foundation and mail to:

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Your support is greatly appreciated!

POSITION ANNOUNCEMENT

Department Head

Biological and Agricultural Engineering
Kansas State University
Manhattan, Kansas

Kansas State University invites nominations and applications for the position of Department Head, Biological and Agricultural Engineering (BAE) Department.

Responsibilities: The Department Head provides leadership and administrative actions to:

- Advance the knowledge and application of engineering and technology to living systems, agriculture, and the environment
- Develop and deliver excellent programs in teaching, research, extension, and international service
- Identify sources and facilitate acquisition of funding support through grants and philanthropic giving
- Represent and promote the department in engineering and agricultural communities
- Evaluate departmental programs, faculty and staff progress, budget and program needs for improvement.

Qualifications: Candidate must have earned a doctoral degree in agricultural engineering or closely related field of engineering, leadership qualities, administrative, personnel management, budgeting, and communication skills, and the ability to represent the department to engineering and agricultural groups. The candidate must have a demonstrated commitment to diversity, excellence in instruction, research, extension, and outreach. The successful candidate must be eligible for the rank of Professor, have excellent interpersonal skills and a strong professional record of achievement. Experience with international programs in a land grant university as well as professional engineering registration is desired.

Department Description: The BAE Department is a community of 250 people striving to fulfill our motto of “We Bring Solutions to Life” and is one of eight departments in the College of Engineering. BAE offers B.S. degree programs in Agricultural Technology Management through the College of Agriculture, Biological Systems Engineering through the College of Engineering, and M.S. and Ph.D. programs. We are ABET accredited and ranked by US News and World Report as the 16th best research program among Biosystems Engineering programs. Faculty and staff are funded through both colleges. The BAE Department has 15 full-time and 6 adjunct faculty, who produce nationally and internationally renowned programs to fulfill its land grant university mission of providing teaching, research and extension educational programs. Students of the department have a strong history of winning national student design competitions and awards. More information on the department can be found at www.bae.ksu.edu.

Kansas State University is located in Manhattan, a thriving community of 50,000 situated in the scenic Flint Hills of Northeast Kansas (www.manhattan.org). The community offers a friendly and welcoming environment. It also features excellent housing, outstanding schools, wonderful parks and recreational facilities, wide varieties of shopping and dining establishments and short commute times. Manhattan is also home to a number of other research centers including the USDA-ARS Engineering & Wind Erosion Research Unit, the USDA NRCS Plant Materials Center, and the National Biosecurity Research Institute and was recently selected as the site for the new National Bio and Agro-Defense Facility. The nearby location of Fort Riley Army post has also resulted in research program opportunities for BAE faculty.

POSITION ANNOUNCEMENT - continued

Position Available: July, 2010

Application Deadline: Screening of applications begins February 15, 2010 and continues until the position is filled.

How to Apply: Send a letter of application, curriculum vitae/resume, name and contact information of five professional references as a single PDF file to Search Committee Chair, Don Gruenbacher (grue@ksu.edu) or as a hard copy to the address below. The letter of application should address the candidate's vision, administrative philosophy, and qualifications.

Department Head Search Committee
c/o Don Gruenbacher - ECE
2061 Rathbone Hall
Kansas State University
Manhattan KS 66506

Questions may be directed to Don Gruenbacher, Phone: 785-532-5600; e-mail: grue@ksu.edu.

Kansas State University actively seeks diversity among its employees. Minority and women candidates are strongly encouraged to apply.

A background check of the successful candidate is required.