

# baeupdate



<http://biosystems.okstate.edu>

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## BAE department welcomes new faculty

Three new faculty members joined our department in the areas of hydrology, biosensors and nanotechnology, and stored product engineering. We are very impressed with their abilities and welcome them to our family.

### Hydrology

Garey Fox joined the department in July as an assistant professor in hydrologic and ecological engineering. Fox holds a 75 percent research and 25 percent teaching appointment.



Garey Fox

Fox received his bachelor's and master's degrees in agricultural engineering from Texas A&M University and his doctorate in civil engineering from Colorado State University. His research interests include seepage erosion of stream banks, pesticide transport modeling and aquatic exposure characterization.

Prior to joining OSU, Fox was an assistant professor in the department of civil engineering's water resources and environmental engineering division at the University of Mississippi, where he taught undergraduate and graduate classes in environmental and hydrologic engineering.

Fox said the water program at Oklahoma State University is strong, and he wants to keep improving it.

"I want to make Oklahoma State as well known for water as Colorado State," Fox said.

Fox serves as a primary adviser to two graduate students and OSU research engineer, Onur Akay.

Fox and his wife, Amanda, have a 3-year-old son, Garrett, and a 6-month-old daughter, Emalee.

### Biosensors and Nanotechnology

Yu "Jessie" Mao joined the BAE family in July and holds a 75 percent research and 25 percent teaching assignment as an assistant professor. Mao is responsible for developing biosensor and nanotechnology research programs and teaches a course on heat and mass transfer.

She completed her bachelor's degree in chemical engineering, as well as her master's in materials science at Tsinghua University in China. She then completed her doctorate in materials science and engineering at the Massachusetts Institute of Technology.

Mao plans to create a research program in nanotechnology to develop nanosensors for pathogen detection. She is looking forward to working with graduate students in the program.

Mao said nanotechnology is developing at a rapid pace.

"It's a lot of development year by year," Mao said. "It's changing very fast, and we have a lot of learn, but we also have a lot of opportunities."

Mao and her husband, Tieming Liu, have a 1-year-old son, Charles. Liu is an assistant professor in the industrial engineering department.

### Stored product engineering

Assistant professor Carol Jones is a native Oklahoman and holds a bachelor's degree in agricultural engineering and a doctorate in biosystems engineering from Oklahoma State University.

Her experience in various industries

brings extensive knowledge of Oklahoma agricultural production and a systematic approach to storage and preservation of crops for marketing to the department.

Prior to her position at OSU, Jones was technology coordinator for the Wheatbelt Educational Partnership and a teacher at Dover public schools. She also held positions as career resource network manager for the Oklahoma Department of Career and Technology Education and as an engineer for W.L. Somner Co. and Worthington Vertical Turbine Pump Co.

Jones served the department as a research engineer and joined the faculty in August. She said she enjoys OSU and wanted to stay in Oklahoma.

"I like the faculty here, and I love Oklahoma agriculture and the challenges of production in Oklahoma," Jones said.

Jones and her husband, Fred, live near Omega, Okla. Their daughter, Kristin Stephens, is a BAE senior at OSU.



Carol Jones



Yu "Jessie" Mao

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## announcing...

The marriage of Meagan Armstrong (B.S. 2006) to Jason Smith in May.

The marriage of Jacob Hamburger (B.S. 2005) to Lacy Woods on Aug. 5.

Bron (B.S. 1999) and Shellie Howard announced the birth of their baby, Charlie Timothy, on April 26.

Sherry Hunt (B.S. 1999, M.S. 2000), research hydraulics engineer, and her husband, Brad, welcomed baby girl Jaley Marie, born July 3.

Venkataramana Sridhar (Ph.D. 2001), and his wife, Gayathri, welcomed new daughter, Sriya, born Aug. 17.

The marriage of Mary Elizabeth Womack (B.S. 2006) to Jonathan Mach (mechanical engineering 2004) on July 1.

Jack and Betty Fryrear celebrated their 60th anniversary Oct. 14. Jack retired from the agricultural engineering department in 1984 after 35 years of employment.

## welcome new staff!

### **Onur Akay**

Hydrology research engineer

### **Stacey Bridges**

Senior administrative support assistant

### **Michele Dziadik-Willingham**

Specialist, Sun Grant Initiative

### **Jannice Hicks**

Senior financial assistant

### **Dimple Kundiyana**

Biofuels research engineer

### **Traci Naile**

Project coordinator, AgrAbility



## A word... from the department head

**Ron Elliott**

**ron.elliott@okstate.edu**

Greetings from Stillwater, home of "The STATE's University."

This fall we have over 30 students enrolled in our introductory course in Biosystems Engineering, and most all of them are new freshmen. As we look forward to the next 4-5 years with these students, we also prepare to say goodbye to an excellent group of brand new BAE alumni. These 10 seniors represent the largest mid-year graduating class in many years.

We've also had the opportunity to welcome new faculty, and to recognize a retiring faculty member. The cover story in this newsletter provides a brief introduction to three outstanding new tenure-track faculty members who joined us over the summer. Drs. Fox, Jones, and Mao have exceptional credentials and we're very enthused about the contributions that they are already making to our programs. We also have a commitment from Dr. Ning Wang, who will soon be joining us as an Assistant Professor. She has an excellent track record and will do research and teaching in the area of mechatronics. As of January 2007, exactly one-third of our tenure-track faculty (6 out of 18) will have arrived in the past 18 months. We also welcome the valuable contributions of non-tenure-track faculty, post-doctoral associates, research engineers, support staff, and graduate and undergraduate assistants. This is an exciting time in our department's evolution.

We wish that the number of faculty was 19 instead of 18, but alas, Regents Professor Marvin Stone retired as of the end of August (see the story on page 4). What an outstanding career! We thank Marvin for his many contributions to the department, and are pleased that he's agreed to come back and teach a graduate course this spring.

Barry Frey, a Ph.D. alumnus of our department, dropped in for a visit a couple weeks ago. It was Barry's first trip back to Stillwater since his graduation in 1979, and he was commenting about how different the campus and city looked. Even more changes are in the works, because OSU is entering a period of unprecedented growth in its physical infrastructure. Over the next five years, over 800 million dollars will be invested in facilities construction. The most publicized projects have been the athletic improvements, including the expansion of the football stadium and the construction of an athletic village north of the stadium. But an even greater amount is being spent on academic, student life, and campus infrastructure projects. These include a new interdisciplinary science building, a new classroom building, the renovation of South Murray Hall, the renovation and expansion of the Architecture building, a multimodal transportation center and parking garage, and a variety of other projects.

At the departmental level, we're looking forward to the construction of a new bioconversion laboratory to be located at "BAE West." The new facility and associated equipment will significantly enhance our ongoing research program in biofuels and other biobased products.

In closing, I'd like to note that our annual student banquet is scheduled for April 14, 2007. By the way, 2007 marks the 50th anniversary of the renaming of Oklahoma A&M College to Oklahoma State University. Some of the readers of this newsletter were on campus as students or faculty in 1957. Please let us know what you remember about that time in the life of our great institution. We always welcome news and views from our alumni and friends!



## biofuel researchers join department

We are excited to welcome two researchers to the department. They bring a wealth of knowledge to the ongoing research program in biofuels.

**Krushna Patil** is an assistant researcher for the biofuels project. Patil has been a postdoctoral fellow at OSU since 2001. He was promoted to his current position in July 2006.

Patil's research focuses on switchgrass and biomass gasification to generate synthesis gas for producing ethanol.

Prior to his position at OSU, Patil was a department head and research engineer at the Sardar Patel Renewable Energy Research Institute in India from 1992 to 2001.

Patil enjoys the challenges of biomass gasification and joined the OSU family because of the technology offered.

**Asma Ahmed** is an assistant researcher focusing on switchgrass fermentation. She joined the department in September 2006 after receiving her Ph.D. in chemical engineering from OSU.

Her research interests include biomass to fuel conversion and bioreactor design and operation.

Ahmed joined the BAE family because of her interests in ethanol production and development.

## our condolences...

Dotty Bowers passed away on Sept. 19 2006. She is survived by her husband, OSU Professor Emeritus Wendell Bowers. Dotty was a Green Valley, Ariz., resident for seven years and was formerly from Stillwater, Okla. She married Wendell Sept. 18, 1948. The parents of three daughters, they had recently celebrated their 58th wedding anniversary.

## john solie receives awards for excellence

John Solie received the 2006 Regents Distinguished Research Award and the College of Engineering, Architecture and Technology Outstanding Adviser Award in October.

Solie, a Sarkeys Distinguished Professor and ASABE Fellow, was recognized for his leadership role in the development of GreenSeeker technology. He was also recognized for his skills as an undergraduate and graduate adviser.

Solie said the most rewarding part of advising is learning where his students begin their careers after graduation.

"Everyone finds their own niche, finds a home, a place," Solie said. "You can't predict it but you look at it afterwards [and say] 'I had something

to do with helping them be ready to find that place.'"

Solie knew he was a nominee for the Regents Distinguished Research Award, but he didn't know he was receiving the Outstanding Adviser Award.

"I didn't know that my name had even been placed in the hat," Solie said.

Solie said he was at the BAE laboratory when he received a call from his assistant, Jana Moore, telling him to attend the CEAT dean's recognition event.

"Five minutes later I was going down and getting this recognition," Solie said. "I had no idea that it was going to take place."



John Solie

## remembering david batchelder

The department offers our condolences to the family of Professor Emeritus David Batchelder, who passed away Aug. 2, 2006.

David was born April 30, 1920, at his parents' farm in Kansas. David entered the Army Air Force in 1942, serving as an aircraft mechanic, second lieutenant and bomber pilot. He completed his military service in 1945 and farmed in Kansas until 1953. David then attended Kansas State University, where he received his bachelor's in agricultural engineering in 1955.

David began his thirty-year career at Oklahoma State University as an instructor in the agricultural engineering department. He received his master's in agricultural engineering at OSU in 1962 and worked on both the main campus and the Oklahoma Cotton Research Station in

Chickasha, Okla. His research focused on farm machinery, particularly in the areas of cotton mechanization, crop tillage and forage drying. David taught a variety of courses and served as a graduate adviser.

David moved through the ranks and became a full professor in 1978. At the time of his retirement in 1985, he was also serving as the agricultural engineering interim department head.

David was predeceased by his wife of 53 years, LaVeta. He is survived by his second wife, Betty; his four children Michael, Barbara Namminga, Phillip and David Scott; nine grandchildren; one great-granddaughter; one brother; and three stepchildren. David was a wonderful colleague and friend and he will be remembered as a happy, gentle man who loved people.

# honors and awards



## marvin stone honored at retirement reception



Scenes from Stone's Retirement Reception. Left to right: Tom Haan, Willard Downs, Ron Elliott and Marvin Stone.

Friends, family and colleagues gathered to honor and recognize Regents Professor Marvin Stone Oct. 14 at a retirement reception and dinner hosted by the BAE department.

Former classmates, students, department heads and colleagues remembered Stone by sharing stories. Speakers included Tom Haan, professor emeritus and former department head; Willard Downs, former classmate; John Solie, professor and colleague; Duane Needham, former doctoral student; and Bill Barfield, professor emeritus and former department head. Current Department Head Ron Elliott and Associate Professor Randy Taylor also made presentations.

"We've all had the opportunity to see first hand the impact Marv has had on students," Elliott said. "We've seen the brilliance of his research; we've seen the tremendous service that he's provided to the department, the university [and] the profession."

Stone, a Flagler, Colo., native, received an associate's degree from Otero Junior College in 1970. He then went to Colorado State University, where he received his bachelor's and master's degrees in agricultural engineering. Stone worked

for two years as a food technologist for the Ralston Purina Co. before pursuing his doctorate in engineering science at Washington State University.

After receiving his Ph.D., Stone joined the BAE department in 1982. He was promoted to associate professor in 1986, then to professor in 1996. In 2003, Stone was appointed to the rank of Regents Professor. Stone has accumulated numerous awards during his career including the Eminent Faculty Award, which is the highest individual honor a faculty member may receive from OSU. In

addition, Stone has performed extensive research and has made significant contributions to the American and international engineering industries. Stone and his colleagues are known for developing the Greenseeker optical sensor and controller system for variable rate application of nitrogen fertilizer. Stone has also conducted research in the areas of machine vision, gamma ray tomography, soil moisture sensing and automated postharvest quality analysis of fruits and vegetables. He holds eight patents.

"He's an example of someone who can do it all," Barfield said.

Speakers recognized Stone as a professor who had the ability to deliver informa-

tion to students to maximize learning.

"[He is a] great researcher, great engineer and great teacher," Barfield said. "[He] always kind of knew students and how to work with them and how to deal with them."

Others thanked Stone for his impact on students and colleagues.

"I congratulate you, Marvin, on your professional accomplishments, but I thank you for your personal influence on the students, the faculty and the staff," Haan said.

After the speakers expressed their thoughts, Elliott presented Stone and his wife, Bonnie, with a scrapbook of memories compiled by assistant professor Carol Jones. Elliott also announced the creation of the Marvin Stone Scholarship. An endowment will be used to fund a yearly scholarship for a BAE undergraduate student.

Taylor presented Stone with several retirement gifts, including an air compressor, Hitachi tool set and a framed print of OSU's Edmon Low Library and Gallagher-Iba Arena.

Though everyone had different stories about Stone, one thing rings true for all: He will be missed.

"I don't know if you can be replaced," said David Zavodny, OSU research engineer. "We wish your successor the best of luck."

**"He's an example of someone who can do it all."**

**Bill Barfield**



## professor emeritus continues teaching in arizona

The term “retired” doesn’t mean much to Professor Emeritus Wendell Bowers.

Though he no longer teaches at Oklahoma State University, he continues to educate employees and student volunteers at the La Posada Continuum Care Community in Green Valley, Ariz.

Bowers became involved with the La Posada programs six years ago when he volunteered to chair an employee scholarship committee. The first project developed by the committee offered La Posada employees \$250 per semester for tuition to the college or university of their choice. The program grew, and in the 2005-2006 academic year, Bowers and La Posada awarded \$31,000 in scholarships. Though Bowers expected the program to be successful, he didn’t know residents would be so supportive.

“[The success of the program] has been a pleasant surprise,” Bowers said. “We have awarded a total of 228 scholarships to 127 employees in the amount of \$116,000.”

The success of the employee scholarship program has led to development of other self-enrichment programs. Bowers has created programs helping employees with English as a second language, GED test preparation, citizenship interview preparation and certified nurse’s aide test fees.

The programs are funded by resident contributions. An annual fundraiser is held to foster support for programs.

“The residents have been very supportive, both financially and with their moral support,” Bowers said. “Our first three fund drives have been around \$35,000.”

Bowers said La Posada began an endowment in the fall of 2006 to fund programs allowing employees to improve their administrative and technical skills.

“We’re providing opportunities for employees to continue their education when it would otherwise be impossible, mainly due to cost,” Bowers said.

Employees and their families often approach Bowers and thank him for helping improve their lives.

“They’re filling a void in their own family situation, and that’s why they’re so appreciative,” Bowers said.

Most recently, Bowers formed his “Friends for Seniors” program, designed to help Sahuarita High School students. Students earn \$12.50 an hour to be paid to the college or university of their choice. Students must work a minimum of 20 hours and receive a tuition credit of at least \$250. Students participate in a variety of activities such as reading to or playing games with residents, helping with campus activities or assisting with clerical duties.

The program provides advantages for both students and residents.

“On prom night, several of the kids show up in their formals and visit in the dining rooms, Bowers said. “There is a high degree of bonding taking place [between students and residents].”

Bowers understands the importance of education and owes some of the success of his programs to his previous academic career and to the support of those involved with La Posada. He received his bachelor’s and master’s degrees from the University of Illinois, where he majored in agricultural engineering. While at UI, he was a student branch adviser and also worked as an extension agricultural engineer for 16 years. Bowers then joined the OSU family in June 1967 as an extension agricultural engineer. From 1978 to 1985, he was the assistant director of agricultural programs at OSU.

“Credit for the program’s success really belongs to the wholehearted support of our administration and to the residents,” Bowers said. “I am mostly a facilitator.”

Bowers received the Volunteer of the Year Award in May 2004; the Excellence in Community Service Award in April 2005 and the Met Life Aging Community Champion Award in April 2006.



*Wendell Bowers, left, stands with scholarship recipient Erika Valenzuela. Photo provided.*



*Student Samantha Gardner assists a resident to the dining room. Photo provided.*

# students



## cortney timmons experiences cambridge



Left to right: Cortney arrives in Cambridge, England; Darwin's home; Cortney at the University of Cambridge. Photos provided.

BAE junior Cortney Timmons had an experience this summer she won't soon forget: The opportunity to study abroad at the prestigious University of Cambridge.

"I just thought studying at Cambridge would be cool," Timmons said.

Timmons was one of 15 OSU students chosen to participate. Students came from various majors and backgrounds.

"One of the exciting things about the trip was that there were representatives from five different colleges [from the OSU campus]," Timmons said. "It was just really cool to see how everyone from their different backgrounds came together for the class."

The class studied 17th Century Newsbooks, a subject BAE students don't usually see on degree sheets. Timmons said she wasn't sure what to expect.

"For an engineering major to go take a liberal arts class — it was very intimidating," she said.

Students attended class for two weeks. Though much of it was lecture taught by an OSU English professor, students were assigned readings in which they had to decipher whether the story was truth or propaganda. Students then presented their views in a round table discussion.

"It was a very unique way of learning," Timmons said. "It just opened up my mind and made me think in a way that I hadn't thought in a while. In engineering, you think so analytically and you're always using science reasoning skills and problem solving."

At the beginning of the second week, alumni and donors participated in a special three day program. Guests included OSU President David Schmidly and OSU Dean of Arts and Sciences Peter Sherwood. Guests conducted leadership seminars, as well as tours of local attractions, including Darwin's home.

Timmons said the trip really motivated her to be a better student, as well as opened her mind to think more creatively.

"Enjoying that situation and that class so much kind of motivates you to be a better student so you can continue to go on things like that," Timmons said.

Traveling to Cambridge wasn't the only opportunity Timmons had during the summer. She also interned for DuPont Crop Protection in Newark, Del. While there, she worked as the crop protection stewardship system developer.

Timmons compiled, revised, date stamped and organized more than 200 documents called objective evidence and developed a fluid document management system.

The purpose of the system is to provide a linked database to be used

in crop protection audits, Timmons said. The system is available on the DuPont Web site.

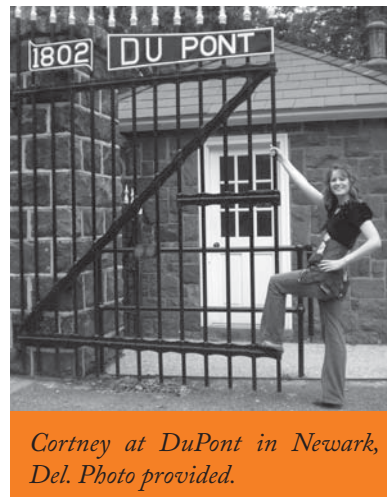
"It's really exciting to be able to go to the DuPont Web site right now and see that because it was something I created," Timmons said.

Her work didn't end there. Timmons' second project at DuPont required her to develop an FFA component for the Northeast Weed Science Society's annual collegiate weed contest. Timmons created the events, rules and regulations. In addition, she recruited FFA students from surrounding states.

"It was really cool to see how FFA chapters in Delaware, Maryland, Pennsylvania and New Jersey differ from FFA in Oklahoma," Timmons said. "That was just a big honor for me because being involved in FFA in Oklahoma was the main reason I got the internship."

Timmons, a Byng, Okla., native, will graduate in spring 2009 and is keeping her career options open.

"I've realized there's just so many opportunities out there for people and I think the hardest thing is just trying to identify one thing that you want to do for the rest of your life," Timmons said. "I'm still exploring all the options and opportunities."



Cortney at DuPont in Newark, Del. Photo provided.

# students



## david bevill places second in asabe competition

David Bevill, a biosystems senior, took second place honors at the international ASABE K.K. Barnes Competition held July 9-12 in Portland, Ore.

Bevill's paper, *Stilling Basin and Riprap Stability Design for RCC Stepped Spillways*, focused on riprap sizing and stilling basin length for a physical model site in Georgia. He completed the research and paper as part of BAE 4400: Special Problems. Sherry Hunt, USDA hydraulics engineer researcher, was his adviser, and Bevill completed his research at the USDA/ARS Hydraulic Research Unit in Stillwater.

Bevill's paper placed third in the written competition, which allowed him to compete in presentations. Bevill, happy with his third-place accomplishment, was surprised to hear of his second-place finish in presentations, giving him second overall in the competition.

"Usually the order doesn't change, so to move up was a big surprise," Bevill said. "I really didn't expect to finish second."

For Bevill, the toughest part of the competition wasn't the research or speaking in front of an international audience. Rather, the challenge was preparing the presentation and fitting a 35-page paper into a 20-slide presentation.

In addition to competing at the international ASABE meeting this summer, Bevill completed an internship with ConocoPhillips in Tulsa. While there, he worked in the pipeline engineering projects group and travelled to Texas, Colorado, Missouri and Illinois during his three-month position. He also had the opportunity to improve a propane drying system, which is now in use on a propane line from Borger, Texas to Denver.

Bevill said he credits his success to the BAE department, which

encourages students to excel.

"Here people really care about you and want to see you succeed and really encourage stuff like this competition," Bevill said.



*Karl Broer, center, accepts first place. David Bevill, far right, placed second at the competition. Photo provided.*

## cowboy motorsports receives sportsmanship award

Oklahoma State University's Cowboy Motorsports team showed some southern hospitality this year at the American Society of Agricultural and Biological Engineers 1/4-scale tractor competition held June 1-4 in Peoria, Ill.

The team was forced to withdraw from performance events because of a cracked pump casing on the tractor's hydraulic system.

Team members didn't get sour, however. They put their free time to use by helping other teams in the competition. Adam Gossen, Cowboy Motorsports member, went to Des Moines, Iowa, to rescue the University of Wyoming's team when their truck broke down.

"It was good experience for us to go out there and help them," said Justin Street, 2004-2005 Cowboy Motorsports X-Team director.

The team's generosity earned them an

award amidst their hydraulic troubles. At the awards banquet, ASABE presented OSU with the sportsmanship award for helping the University of Wyoming and others at the competition.

"We were pretty surprised that we'd gotten the sportsmanship award," Street said.

Curtis Johnson, 2004-2006 Cowboy Motorsports director, said he wasn't as surprised.

"We've won the sportsmanship award quite a few times in the past," Johnson said. "I don't know, it's just the way we are — we're always willing to help."

The hydraulic component has been fixed and the tractor is now ready for freshman modification. The tractor will compete in next year's competition in X-Team events. Cowboy Motorsports is

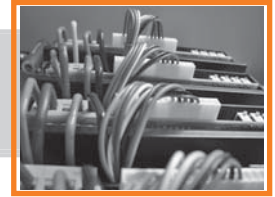
also designing a mechanical component tractor for regular competition.

The 2007 1/4-scale tractor competition marks the 10th anniversary of the event and will be held May 31-June 3 at the Expo Gardens in Peoria, Ill.



*The Cowboy Motorsports team at the ASABE 1/4-scale tractor competition. Photo provided.*

# students



## bae seniors win agco national student design award

Oklahoma State University's senior design team is on a winning trend. After placing second in 2003 and winning first in 2004, the team won first-place honors again in 2006 in the ASABE AGCO National Student Design Competition.

This year, the four member team, advised by assistant professor Paul Weckler, redesigned a manual cattle chute for W-W Livestock Systems of Thomas, Okla.

"I thought the redesign of the squeeze chute was something [W-W] really needed to stay competitive in the market," Weckler said. "I thought it was a challenging project and I knew I was going to have a bunch of students that grew up on farms and ranches with cattle backgrounds so they knew some of the issues involved with what makes a good squeeze chute."

The squeeze chute design placed second in initial competition, but a polished 15-minute oral presentation advanced them to first.

"You have to be right on the money with your presentation, and they did an excellent job and they scored real high," Weckler said.

Senior design is a two-semester capstone course that teaches students professionalism and problem-solving for real-world engineering problems.

"Students are about ready to graduate and become professional engineers, and they need to be responsible when they get into the workplace," Weckler said. "We emphasize that professionalism aspect."

This year's team members were Joe Biggerstaff, Ryan Haar, Matt Kilker and Taylor Miller. Biggerstaff and Haar graduated in May 2006 and are both employed with Case New Holland in

Wichita, Kan. Kilker and Miller will graduate in December 2006. Though W-W is not currently using the team's design, it plans to incorporate the design on future cattle chutes.



*Senior design students work on the W-W cattle chute. Photo provided.*

## tracking recent graduates

Wendy Sheets, B.S. 2005  
Engineer Intern  
Oklahoma Department of  
Environmental Quality  
Oklahoma City, Okla.

Harish Bangera, M.S. 2005  
S&S Technologies  
Houston, Texas

Joseph Biggerstaff, B.S. 2006  
Case New Holland  
Wichita, Kan.

Brian Dillard, B.S. 2006  
Field Engineer  
USDA Natural Resources  
Conservation Service  
Lubbock, Texas

John K. Evicks, B.S. 2006  
Project Engineer Trainee  
Leprino Foods  
Allendale, Mich.

William Ryan Haar, B.S. 2006  
Design Engineer  
Case New Holland  
Wichita, Kan.

Mary Elizabeth Mach, B.S. 2006  
Design Engineer  
Garver Associates  
Norman, Okla.

Dave Mercer, B.S. 2006  
Completing mission work in China

Rachel Oller, B.S. 2006  
Engineering Trainee  
OneOK  
Tulsa, Okla.

Megan Perry, B.S. 2006  
Supervisor, Sales/Designs  
Brickman Group  
Austin, Texas

Meagan Smith, B.S. 2006  
Environmental Consultant  
Alexander Consulting Inc.  
Tulsa, Okla.

Mary Crawford-Campbell, M.S. 2006  
Coca-Cola  
Atlanta, Ga.

# events



## ray huhnke a panelist at biofuels conference

Ray Huhnke, professor and extension specialist, was a guest speaker at *grow: The Oklahoma Governor's Conference on Biofuels* held Oct. 3-4 2006 at the University of Oklahoma in Norman.

The conference featured two days of presentations and discussion regarding the status and development of the Oklahoma biofuels industry. Speakers included Oklahoma Gov. Brad Henry, National Biomass Coordination Co-Director John Ferrell, former CIA Director Tom Wosley and others directly and indirectly involved with biofuels.



Huhnke, a panelist and moderator of the conversion technologies session, made a presentation explaining the research performed at Oklahoma State University.

Huhnke said the purpose of OSU's research is to find a means of converting low cost biomasses and feedstocks into ethanol using a gasification process. He said Oklahoma is known as a fossil fuel state, and Oklahoma needs to "add a little green to that energy portfolio."

Huhnke said OSU is working with

various types of biomass and technologies for use in its gasifier and bioreactor systems.

"I must say that we're not looking at only one specific technology," Huhnke said. "I think there's room for many bioconversion technologies, many of which we're involved in."

According to Huhnke, OSU is working with switchgrass and sweet sorghum because they grow well in Oklahoma soils and climate.

Huhnke said he would like to develop a commercial plant to increase biofuel production.

"I consider this an investment in rural America," Huhnke said.

## glenn brown chairs the oklahoma water symposium

Several of our faculty members had the opportunity to discuss water at the Oklahoma Water symposium held Oct. 5-6 at the Oklahoma History Center in Oklahoma City.

Glenn Brown, professor and graduate coordinator, chaired the symposium. Brown also presented a luncheon keynote, *Desperately Seeking Darcy: Henry Darcy and the Making of a Law*, which explained the importance of Darcy's contributions to

modern hydraulics.

Rebecca Chavez, research engineer, presented her poster on bioretention cells.

Chavez said the water symposium is a great place to keep abreast of developments in hydrology.

"The water symposium itself is interesting because you get to hear about different projects about water around the state," Chavez said.

New faculty member Gary Fox spoke

about the role of groundwater seepage on streambank stability. Fox said bank material may contribute as much as 80 percent of the total sediment from incised stream channels in some areas, according to research conducted in Mississippi.

Oklahoma Water is an annual event held by the Oklahoma Water Resources Research Institute and the BAE department. For more information, visit <http://environ.okstate.edu/okwater>.

## 2006-2007 asabe student officers

### President

Michael Matousek - Hennessey, Okla.  
*Bioprocessing*

### Vice President

Sarah Edens - Ponca City, Okla.  
*Environment and Natural Resources*

### Secretary

Sarah Rowland - Bennington, Okla.  
*Food and Bioprocessing*

### Treasurer

Craig Spencer - Stillwater, Okla.  
*Biomechanical*

### Parliamentarian

Buck Melton - Lawton, Okla.  
*Biomechanical*

### Historians

Clay Turney - Comanche, Okla.  
*Biomechanical*  
Zath Marable - Smithville, Okla.  
*Biomechanical*

### Social Directors

Dustin Holden - Fletcher, Okla.  
*Biomechanical*  
Kristin Stephens - Kingfisher, Okla.  
*Biomechanical*

### Ag Student Council Representative

Matt Lemmons - Drumright, Okla.  
*Biomechanical*

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*Environment and Natural Resources*

### Cowboy Motorsports Director

Kyle Dollins - Stillwater, Okla.  
*Biomechanical*

### Cowboy Waterworks Co-Directors

Zath Marable and Clay Turney

# alumni success stories



## Charles Griffith: B.S. 1977, M.S. 1979

*Editor's Note: Charles Griffith was featured in the fall 2004 issue of BAE Update, but that article included inaccurate information. The BAE Update apologizes for this error.*

Charles L. Griffith has been involved with more than 900 projects since graduation, including post tensioned structural design, land planning, on-site waste water system design and carcinogenic and hydrocarbon abatement.

He has been employed by a variety of companies, including Mercury Marine in Stillwater, Okla., Guyana Pharmaceutical Corp. and Guyana Fisheries Limited. In addition, Griffith is the co-founder of Metro Tech Engineering Associates in Dallas and the founder of CLG Enterprises.

While at Mercury Marine, Griffith was a tool designer and successfully

designed and supervised the construction of jigs and fixtures that increased efficiency and reduced the cost of production.

As a process engineer at Guyana Pharmaceutical Corp., Griffith designed and constructed an elevated wood floor and foundation to store bulk rice, corn and soybeans. He also provided overall process engineering maintenance and operational functions for cassava, jelly and citrus products. While a process manager at Guyana Fisheries, Griffith rehabilitated two shrimp processing lines and improved processing capabilities by 250 percent. He also supervised a fish product development program implemented by the International Development Research Centre in Ottawa, Canada.

Griffith has two children. Dr. Ekwensi Griffith practices in Kansas and Alicia Griffith is an audiologist in New York.

## Venkataramana Sridhar: Ph.D. 2001

Venkataramana Sridhar is the lead author of a research study titled *Large Wind Shift on the Great Plains During the Medieval Warm Period*. The study was published in the July issue of the prestigious journal *Science*.

The study analyzed orientation, morphology and structure of sand dunes in the eastern section of the Nebraska Sand Hills to better understand structure.

Sridhar's main role in the study was analyzing and interpreting modern bimodal wind regime in the Sand Hills. He used more than 30 years of wind speed and direction data in a computer program to generate a model of previous sand dune activity. When the computer generated dunes did not match today's dune orientation, Sridhar shifted the south summer wind component by 70 degrees, causing prevailing winds to be from the southwest instead of today's southeast flow. He concluded wind direction and strength have changed.

To complete the report, geologists collected optically stimulated luminescence dating information for three years. Sridhar and his colleagues spent one year piecing together information.

Sridhar continues to do hydrology research on the Sand Hills. He and his colleagues plan to study triggering mechanisms for dune activation under vegetated and barren conditions as well as the connection between surface-subsurface and atmospheric exchanges.

Sridhar holds a bachelor's in agricultural engineering from the Tamil Nadu Agricultural University and a master's in engineering from the Asian Institute of Technology. After completing his doctorate degree at OSU, he worked as a post-doctoral research associate in the civil and environmental engineering department at the University of Washington.

Sridhar is currently a research assistant professor at the University of Nebraska-Lincoln.

## Myron Paine: Ph.D. 1971

Myron Paine, a retired avionics and electrical engineer, has written a historical fiction book titled *Frozen Trail to Merica*.

The book focuses on the idea that Norse people walked across the ice from Greenland and became the Shawnee and Delaware.

"A history book, 'Ancient Crossings, Early Pioneers', included mention of the 4,000 Norse people who vanished from Greenland about 1342," Paine said. "That mention triggered the idea to write a fiction story about the Norse people who left Greenland and journeyed to the Mandan villages."

In addition to receiving a doctorate degree from OSU, Paine worked for Oklahoma State for more than ten years as an extension agricultural engineer, a regional extension engineer and as an assistant professor.

Paine's book is available through Galde Books as a two-volume manuscript.

## John Underwood: B.S. 1949

John Underwood has more than 45 years of experience in administrative, civil and project engineering. He is currently self-employed as an engineering consultant and is the project engineer for a \$16 million high school project.

While at OSU, Underwood completed his bachelor's in engineering focusing on civil and agricultural engineering with minors in electrical and mechanical engineering. After graduation, Underwood took business courses at the Oklahoma University extension as well as Blackwood Davis Business College in Oklahoma City, Okla. His first job was at the Public Works Center in Guam in 1953, where he

# we want to know about you... your news is good news!

Return this form to:  
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We would like to include you in our "Alumni Success Stories." If you want to participate, please send a letter or e-mail to us describing your career (where you work and what you do on a daily basis), as well as any personal information you would like to share. If you have recently participated in the success story feature, we would still like to hear from you and about any changes you have had in your life.

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HomePhone \_\_\_\_\_ Fax \_\_\_\_\_

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City \_\_\_\_\_ State \_\_\_\_\_ PostalCode \_\_\_\_\_

BusinessTitle \_\_\_\_\_

BusinessPhone \_\_\_\_\_ Fax \_\_\_\_\_

E-MailAddress \_\_\_\_\_

WorkDescription \_\_\_\_\_

What year did you get your biosystems and agricultural engineering or mechanized agriculture degree(s)?

BS \_\_\_\_\_ MS \_\_\_\_\_ Ph.D. \_\_\_\_\_

OtherInformation \_\_\_\_\_

was a director of civil engineering. While there, he created civil engineering designs for a naval workforce covering 2,000 sets of quarters; highways and road systems; an 11-million-gallon-a-day water system; and fuel depots for the Navy and Air Force.

Since then, Underwood has been a project engineer for Flintco General Contractors, Metro Contracting Corp. and Linbeck Construction Co. He has also held various project management and administrative positions.

Underwood resides in Salem, W.Va., and is seeking fellow 1949 BAE classmates.

## congratulations!

Josh Payne, Area Animal Waste Management Specialist, Muskogee, was presented the individual Communications Award and Newsletter Team Award at the Oklahoma Association of Extension Agricultural Agents state meeting. He coordinates animal waste and environmental management programs in eastern Oklahoma, including a poultry waste management training program.

## our condolences...

We offer our condolences to the family of John F. Futhey II, who died on April 19. John received his bachelor's from OSU in agricultural engineering in 1979. John served as a Grant County, Okla., commissioner from 1996 to 2004 and was active in the Oklahoma State Firefighter's Association.



# baeupdate

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## calendar of events

- Dec. 25 - Jan. 1: University Holiday
- Jan. 8: Spring Semester Begins
- March 19-23: National Ag Week
- March 17 - 25: Spring Break
- April 14: BAE Student Banquet
- May 5: Spring Commencement
- May 31 - June 3: ASABE 1/4-Scale Tractor Competition, Peoria, Ill.
- June 17 - 20: ASABE International Meeting, Minneapolis, Minn.
- June 17: OSU Alumni & Friends Social, 8 p.m., Location TBA

# baeupdate

*bae update is a publication of osu's  
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ing and is published each semester to inform alumni  
and friends of activities in the department*

we invite you to submit comments,  
story ideas or alumni updates to

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