

## BAE Students Hit the Jackpot at International Meeting



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From national presidency to placing in each competition entered, Oklahoma State University Department of Biosystems and Agricultural Engineering students enjoyed great successes at the International American Society of Agricultural Engineers meeting this summer in Las Vegas, Nev.

Candice Johnson, senior in biosystems and agricultural engineering, was elected the 2003-04 president of the ASAE National Preprofessionals Council, the highest elected student office in the society.

As the society's president, Johnson will head the officer team composed of five other students from across the nation in various projects preparing for the next International ASAE meeting in Ottawa, Canada.

"Our primary goal on the officer team is to get students involved and introduce them to how participation in a society like ASAE can influence professional pursuits and improve knowledge in their area of interest," said Johnson.

The team's projects include promoting regional ASAE meetings, improving communication above local levels through a biannual newsletter and more Internet resources, and

planning the International meeting.

"I am in charge of one of our main goals, which is organizing the student activities at the conference," said Johnson. "That is working with different committees at the conference, so the students actually play a central role in promoting what students are doing in ASAE and letting the industry know what we are doing and are capable of."

Johnson is the second national president from the department in the past six years, following Carly Washmon who was president in 1998-99.

In Johnson's final semesters at OSU, she is quite busy with coursework and extracurricular activities. Johnson currently is working on her Senior Design project, a design to improve the performance of a common construction site tool, silt fence.

**See Jackpot page 3**



Candice Johnson, biosystems and agricultural engineering senior, kneels at the edge of a failed silt fence near Sangre Elementary in Stillwater. Through her Senior Design Team, she will have the opportunity to work on improving the performance of a current silt fence during her final semesters at OSU.

# Where are they now?

## Tracking BAE Alumni

### Summer 2003 Graduates

Nachiket Kotwaliwale, Ph.D.  
Returned to India

Duane Needham, Ph.D.  
San Francisco, Calif.

Dharmendra Bangelore, M.S.  
Food and Agricultural Product Center  
Stillwater, Okla.

Paisar Gadiware, M.S.  
Returned to Philippines

Stewart Reed, M.S.  
NTech Industries, Inc.  
Stillwater, Okla.

### Spring 2003 Graduates

Chris Cross, M.S.  
Public Works  
Owasso, Okla.

Oleksandr Mykhalovyn, M.S.  
EcoCheese Ltd.  
Kiev, Ukraine

Chad Fisher, B.S.  
Halliburton Energy Services  
Duncan, Okla.

Mickey Friedrich, B.S.  
Halliburton Energy Services  
Duncan, Okla.

Darren George, B.S.  
Terracon  
Garden City, Kan.

Scott Schneider, B.S.  
USDA – NRCS  
McAlester, Okla.



# A Word from the Department Head

Dr. Ron Elliott  
relliot@okstate.edu

As we near the end of the fall semester, I'd like to offer a Cowboy "howdy" to each of our alumni and friends.

It was great to see a number of you at the OSU reunion at the ASAE meeting in Las Vegas, and at the BAE football tailgate party this fall.

Speaking of football, the sports fans in our midst are making their bowl plans, while the men's basketball team is nationally ranked and the soccer women are savoring a Big 12 championship. Of course, there's much more going on at OSU than just athletics, and that's certainly the case in BAE.

I'll begin with a development that definitely has my attention. Due to continuing serious budget pressures, the Division of Agricultural Sciences and Natural Resources offered a special faculty/staff retirement incentive program this fall.

Being good in math, a number of our BAE employees decided that this was too good a deal to pass up. So at the beginning of 2004, we'll be without four (yes, four!) of our faculty – Sam Harp and Ron Noyes in extension, and Bill Barfield and Glenn Kranzler in research and teaching. Also, Phil Norton (Technology Transfer Specialist) and Tom Underwood (Research Technician IV) are retiring from our staff.

This represents a substantial loss of talent and experience, and it's coming all at once. The remaining faculty and staff will pitch in and cover responsibilities as best we can. In the meantime, we'll be doing our best to convince the administration of the need to replenish our human resources.

Expect to read much more about our retirees and their outstanding careers in the spring issue of the BAE Update.

Our faculty continue to make a real difference in their teaching, research, and extension programs.

We congratulate Marvin Stone on his promotion to Regents Professor, and Dani Bellmer and Tim Bowser on achieving tenure along with a promotion to Associate Professor. Several BAE faculty have recently been

recognized with significant awards; you can read about them in this newsletter.

In my view, all of our faculty and staff are award winners, and quite often others recognize that as well!

The number of undergraduate students majoring in Biosystems Engineering has climbed to 95! That represents our largest enrollment in many, many years.

Our students continue to be busy and productive, not only in their courses but also in extracurricular activities.

Candi Johnson, a senior in our program, was elected as the national president of ASAE's pre-professionals. This is quite an honor as well as an important responsibility.

Attendance at our local ASAE Student Branch meetings is up, and the club officers are doing a great job in planning a range of activities. Both the quarter-scale tractor and "fountain wars" teams are off and running in preparation for their 2004 competitions.

Please mark Saturday, April 3, on your calendar as the date for our annual BAE student banquet.

Although our enrollment has grown considerably, we're always interested in attracting capable students interested in learning more about the exciting field of biosystems engineering. Please assist us in our efforts by forwarding the names and contact information of prospective students with whom you come in contact. Alumni and friends of the department are often our best recruiters.

We call our newsletter the BAE Update. Please consider sending us an "update" on your professional and/or personal life. Alumni (and faculty) really enjoy hearing about what other alumni have been up to, but that's only possible if we receive the information from YOU.

We're also doing our best to update our alumni database. If you've kept in touch with classmates over the years, and can provide that information to us, it would enable us to check our records and possibly fill in gaps.

Thanks for reading, and best wishes for the holiday season.

## Jackpot continued

Johnson's design team hopes to follow in the footsteps of the department's previous team and take their design to the national AGCO Student Design Competition.

Mary Crawford, Scott Schneider and Matt Simpson, the 2003 team, placed second in the competition with their project entitled "Designing an Island Habitat for the Interior Least Tern." This project was special because the interior least tern is an endangered species in the central part of the United States.

The competition is conducted annually by ASAE and is based on a written report and an oral presentation. Awards of \$1250, \$1000 and \$750 are presented to the first, second and third place winners but the biggest accomplishment for the team may have been helping out an endangered species.

"In recent years, it seems like we are constantly changing the environment around us without considering the animals and the habitats that we are changing or destroying," said Crawford, a biosystems and agricultural engineering senior. "It was a chance to give the terns a place to nest and have a good habitat to return to year after year."

The team worked with the Army Corps of Engineers in Tulsa, Okla., as they developed the ideas and design for this project. Their final design and recommendations were presented to the Corps before the competition.

"Our contacts in the Army Corps were really excited," Simpson said, "and gave us every indication they were going to implement the design pretty soon."

As the department's capstone course, the Senior Design project provides an opportunity for students to combine all of their education from previous classes to work on solving a real-world problem.

"We learned what it would be like having

an engineering project and working with people to generate and agree on ideas," said Crawford, "and come up with a solution in a timely manner. It makes a difference when you have a real client to help, not just a professor coming up with a problem."

The OSU Fountain Wars team also finished well in the competitions, placing third. Fountain Wars is a new competition to the ASAE and was developed by Glenn Brown, a professor in biosystems and agricultural engineering, for the students in the society with environmental interests.

The contest had three phases. The first phase was to suspend a ball as high as possible in the air with their fountain design. The second phase included an aesthetic display where the teams used decorations and water performances to show beauty. The final phase consisted of providing a uniform distribution of water as the fountains ideally spray equal amounts of water into cans set at certain lengths from the source.

"Our team had a bunch of electric valves to make the water dance up and down to look like the fountains at the Belagio," said Michael Kizer, Fountain Wars team advisor and associate professor in the department. "It worked just fine during the trial period, but when it came time for the demonstration their power supply burned out."

Although the team was not in the first place ranking, the lessons the students learned from the project may still have been a success.

"It is to teach them how to work as a team and how to do brainstorming," said Kizer. "You can do something on the drawing board but it never works quite like you think it will."

To top off the successes at the meeting, the department hosted its First Annual Oklahoma State Alumni and Friends Social, organized by Becky Ostermann, lecturer and undergraduate recruiter.

"It was a time for everyone to get together and socialize," said Ostermann. "This provided an opportunity for not only alumni to come and interact with faculty members, but also a chance for students to do some good networking."

The event, held at Buca di Beppo, a family-style Italian restaurant in Las Vegas, was attended by 75 alumni, faculty, family, students and friends.

"We are excited about planning on our next social in Ottawa for the 2004 ASAE conference," Ostermann said.

# 2003 - 2004 ASAE Student Branch Officers

## *President*

**Jacob Hamburger**  
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## *Vice-President*

**Steven Fowler**  
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## *Secretary*

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## *Activity Committee*

**David Crossley**  
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**Levi Johnson**  
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## *Historians*

**Colby Funk**  
Weatherford, Okla.  
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**Rachel Cancienne**  
Broken Arrow, Okla.  
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## *ASAE Student of the Year*

**Mary Crawford**  
Broken Arrow, Okla.  
crawfmr@okstate.edu



Students, faculty, friends and alumni enjoy great food and conversation at the First Annual Alumni and Friends Social at the International ASAE conference in Las Vegas.

# BAE Students Recognized with Highest Award in Oklahoma 4-H

Two biosystems and agricultural engineering students were honored with the greatest recognition in the Oklahoma 4-H program.

Dusty Conner, biomechanical sophomore, and Josh Grundmann, food-processing freshman, were selected as the 2003 State 4-H Hall of Fame winners in May 2003.

The students were selected through an evaluation of a record book tracking their 4-H careers into a Blue award group of the top 20 4-H members across the state. The two were chosen above the others and named the Hall of Fame recipients following an interview with a panel of judges.

4-H is the largest youth service organization in the world with more than 30,000 Oklahoman members. Members participate in project areas ranging from agriculture to computer science. The 4-H program focuses on teaching its members to contribute to community service and leadership responsibilities.

Conner's main project in 4-H was volunteering as a mentor in the Enid Boys Group Home. Grundmann worked extensively with the 4-H citizenship project.

Conner said 4-H has always been a strong family heritage for him.

"My grandma was a volunteer for over



Freshman Josh Grundmann and Sophomore Dusty Conner proudly display their "green jackets" as a sign of their accomplishments in the 4-H program.

50 years and my mom and sister were very involved members," he said. "I wanted to continue the 4-H family tradition."

Grundmann said he has learned the importance of community involvement through 4-H as he started small and worked

his way up to statewide service.

"My main citizenship project had gone from helping my dad build handrails at church to organizing statewide campaigns to collect pull-tabs off of pop cans for the Ronald McDonald House," he said.

Conner said being in 4-H also helped him select the College of Agricultural Sciences and Natural Resources and the Department of Biosystems and Agricultural Engineering for his studies.

"During some 4-H events, I was able to tour the college and BAE department," he said. "I felt the faculty was outstanding, and I wanted to keep agricultural roots but also pursue an engineering degree. That made this department a perfect fit."

As Grundmann prepared for college, he looked to his 4-H friend, Conner, for guidance when declaring his major.

"I watched Dusty go into BAE," Grundmann said. "We have a lot of similarities and he said he liked it. I found that the department is small, comfortable and just what I want."

Having students of this caliber provides further evidence of the quality of the biosystems and agricultural engineering program at Oklahoma State University.

## ..... Congratulations! .....

Bron and Shellie Howard, of Altus, Okla., are the proud parents of their daughter, Sara Grace, born on May 30, 2003. Bron was a 1999 BIOEN graduate and Shellie was a BAE student worker for four years.

Bernadeth Surjandinata and her husband Malone Bowen proudly announce the birth of their son, Jacob Johanes Bowen. Arriving on May 31, 2003, he weighed 6 pounds and 2 ounces and was 19 inches long. Bernadeth graduated with a bachelor's degree in 1998 and was a master's graduate in 2000.

Daniel Itenfisu, former BAE post doctoral fellow, and his wife Selam are the proud parents of a baby girl. Sarah was born on September 27, 2003, and weighed 9 pounds and 5 ounces and was 22 and one fourth inches long. Also, welcoming Sarah is

her 4-year-old sister Hanna.

Congratulations go out to Jeyam Subbiah and his wife Latha on the arrival of their son Vishal. He was brought into the world on September 29, 2003, weighing 6 and a half pounds and was 21 inches long. Jeyam is one of our research engineers and a doctoral candidate.

Danielle (Dani) Bellmer, associate professor in biosystems and agricultural engineering, and her husband Jeff are celebrating the arrival of a baby girl. Alissa Deane arrived on November 4, 2003, weighing 7 pounds and 3 ounces. She was 21 and one fourth inches long. Alissa has a 3-year-old brother Collin.

Duane Needham was married to his fiancé Angelica in August 2003. They held a

ceremony in her home in Uzbekistan and later held a second ceremony at his home in Nebraska. Duane was a doctoral graduate in 2003. The couple is now living in San Francisco, Calif.

Stewart Reed, a master's graduate in 2003, was married to his fiancé Ashley on September 27, 2003. The wedding was held at a local church in Stillwater, Okla. The couple currently resides in Stillwater.

### **BAE Welcomes ...**

Reid Christianson, Research Engineer  
Ellen Stevens, Assistant Researcher

### **And says farewell to ...**

Daniel Itenfisu, Post Doctoral Fellow

# Cowboy Motor Sports Team Pulls with a Purpose



*The smell of exhaust and dust filled the air as the Cowboy Motor Sports team competed in the performance pulls in the ASAE quarter-scale tractor competition in Moline, Ill.*

The Cowboy Motor Sports team and X-team pulled with a purpose to excel in the ASAE quarter-scale tractor competition in Moline, Ill., on May 31, 2003.

Thirty teams from across the United States and Canada competed in the competition. With a strict set of rules to follow, the teams were judged on written design reports, oral presentations, tractors' maneuverability, performance pulls and designs based on manufacturability, serviceability and safety.

The motor sports team placed second in the oral presentation, third in the performance pulls and fourth overall, while the X-team placed first overall.

"The OSU entry definitely caught everyone's attention at the competition, both in terms of appearance and performance," said Ron Elliott, who attended the event. "It should be noted that some schools use this project as a course activity; in our case, it's an extracurricular labor of love."

A contest that was not included in the official competition was the "Guts" pull. Here the motor sports team was able to exhibit the real power of their machinery.

The contest followed the performance pulls and included a relaxation of the official competition rules. The governor control on the 16-HP engines was raised to 4000 RPM, and the tractor weight limit was removed.

"The OSU team easily out-pulled the other 6 machines," said Elliott. "Our tractor was none the worse for wear."

These accomplishments were several

years in the making and were an accumulation of all the previous teams' research.

"In 2002, the team was very competitive but just out of the running," said John Solie, team advisor and bio-systems and agricultural engineering professor. "This year they produced one of the three best tractors there. They

learn by experience and go back and make it better."

The 2004 members are currently working together on building the new tractor and will work until the competition in the late spring. The project requires much planning, research, and trial and error experimentation.

"We spend most of the fall doing research and seeking design alternatives," said David Crossley, BAE senior and director of the 2004 team.

The X-team includes underclassmen who make improvements to the previous year's tractor for their part of the competition and also work on developing the new tractor.

"I've had a good experience, but it boils

down to team work," said Colby Funk, BAE junior. "We all work well together and do the best we can with what we have."

The team does everything from start to finish on the tractor, including raising most of the funds to support the project. The team and tractors attend fairs and parades to perform exhibition pulls to raise awareness for the program and to promote interest from potential sponsors.

Their fund-raising activities include custom barbecuing and seeking sponsorships from families and businesses.

"The team develops a concept, does the design work, raises the money and builds the tractor," said Solie. "This is not a faculty tractor or the engineering laboratory's tractor. It is the student's tractor."

The members involved benefit in many ways from the interaction with the machinery.

"I'm learning more about tractor performance and tractor design," said Kristin Stephens, BAE freshman and 2004 team secretary. "I would like to work for a company that does machinery design and the team helps give hands-on experience with machinery instead of sitting in class learning about it."

Many opportunities can be offered for members as they search for a related career.

"The recognition that your team produced one of the best tractors in the country in this area does open jobs up," Solie said. "Employers want to know if you can perform these kinds of tasks."



*The Cowboy Motor Sports Team proudly exhibit their tractor model at the ASAE competition in Moline, Ill.*

# GreenSeeker Makes Headlines

By Katie Reim  
Contributing Writer  
and Erin Harris

Everyone is seeing green from the recent publicity of Oklahoma State University's very own "GreenSeeker" project.

Several online and print publications circulating to thousands of people are featuring the award winning "GreenSeeker" technology in their publications. From the Tulsa World to the Southwest Farm Press Daily, readers are learning about the innovations of "GreenSeeker" and Oklahoma State University.

"GreenSeeker," pictured below, was recognized with a 2003 AE50 award, which represents the best and brightest developments throughout the world for the agricultural, food and biological systems industries.

"GreenSeeker responded to a 'real world' need and brought cutting-edge science and technology to bear," said D. C. Coston, associate director of the Oklahoma Agricultural Experiment Station. "This is truly a landmark development and has the potential to solve a number of environmental and economic concerns in relation to crop production."

"GreenSeeker" technology is a sensor-based variable-rate fertilizer sprayer applicator that can raise nitrogen use efficiencies in field crops. The sensors detect crop potential yield and overall nitrogen in the plants and use that information to regulate top-dress nitrogen application rates "on the go" with real-time sensor data.

Recently, it was selected by the United States Department of Agriculture to represent the nation's Cooperative States Research, Education and Extension Service at the Ministerial Conference and Expo on Agricultural Science and Technology in Sacramento, Calif.

The conference, which focuses on the needs of developing countries in developing new agricultural technologies, was attended by more than 1,500 leaders and ministers of agriculture from more than 180 countries.

"GreenSeeker" is currently being manufactured and marketed by NTech Industries Inc. in Stillwater.



# Stone Receives Regents "Trifecta"

By Cathy Herren  
Contributing Writer



Marvin Stone, regents professor in biosystems and agricultural engineering, presents charts to teach his students fundamental computer knowledge.

A biosystems and agricultural engineering professor has been recognized with a unique "trifecta" of regents awards for his excellence in research and teaching.

Marvin Stone, regents professor of biosystems and agricultural engineering, was presented the Regents Distinguished Research Award in September 2003 and the Regents Distinguished Teaching Award in September 2002. He was promoted to the rank of regents professor in July 2003.

"We are very fortunate to have Dr. Stone as one of our faculty," said Sam Curl, dean and director of the Division of Agricultural Sciences and Natural Resources. "He has achieved at the highest levels, and we are very proud of him and want to support his work in every way we can."

Stone is one of only 20 regents professors among the more than 200 faculty members in DASNR.

The biosystems and agricultural engineering

department has two retired regents professors and one regents service professor. Stone is the only active regents professor in the department.

Continuing to excel in research and teaching at Oklahoma State University is important, Stone said. He has no current plans to become involved in anything beyond teaching and research.

"It is not likely that the pace here will slow much," said Stone. "There are research projects in front of me beyond my capacity to handle them."

For the Distinguished Research Award, the biosystems and agricultural engineering department submitted a nomination for Stone to DASNR last spring. The division may choose up to three nominees to continue to the university level where they are evaluated and one candidate from the division is selected for the award.

In addition to the regents awards, Stone has been honored with the Sarkey's Distinguished Professor award, which was created to honor distinctive contributions in teaching, research and / or service.

"From my perspective, it is not obvious that I am very different from my peers," Stone said. "Chance has allowed me to work on things that are recognizable."

Among Stone's recognizable projects is the "GreenSeeker" sprayer. Stone was one of several researchers to contribute to the development



Marvin Stone describes how to use certain computer programs in his (BAE 1012) class for freshmen.

of this fertilizer spray applicator.

Stone's excellence in research projects including GreenSeeker has a tremendous impact on his students, said Joe Biggerstaff, biosystems and agricultural engineering junior. Biggerstaff works part time at NTech Industries Inc. He obtained that position after working with Stone on the research project for "GreenSeeker."

"It was more of a learning experience than a job," said Biggerstaff. "By working with him and taking classes from him, Dr. Stone has shown me how to connect the knowledge I gain in class with how I can apply it in the real world."

Stone's outstanding teaching ability is evident in his students' comments. Ryan Haar, biosystems and agricultural engineering sophomore, was in Stone's Data Analysis in Biosystems Engineering course.

"Dr. Stone is really smart but can talk to students at an appropriate level and can make students think out an answer without embarrassing them," said Haar. "For example, if you are working in Excel, it may be something extremely simple to him, but he will act as though it is a normal problem and help you work through it."

Ron Elliott, department head for biosystems and agricultural engineering, has heard many students remark on Stone's ability to engage students in the classroom.

"He makes the students feel that they are partners in the learning process," Elliott said. "He takes the approach of working together with students to help them learn."

Stone's dedication to both aspects of his appointment at OSU is evident in the quality of his work, he said.

"It is pretty unique to be at the top of your game in both teaching and research," said Elliott. "He exhibits excellence in all that he does."

# Faculty Recognized for Their Achievements

## Daniel Storm



Congratulations to Daniel Storm, professor in biosystems and agricultural engineering, for receiving the James A. Whatley Award for Meritorious Research in Agricultural Science. This honor goes to a young faculty member with a distinguished record of research.

The award was established in 1982 following Whatley's retirement. This is a great recognition of Storm's and his students' efforts through out the years.

Storm, also, was honored with the Sterling L. (Bud) Burks Award for Outstanding Environmental Research. This award is presented to recognize the faculty member who demonstrates outstanding accomplishment in environmental research.

Storm was recognized with this award at the Environmental Awards Banquet on April 23, 2003.

## Danielle Bellmer



Danielle (Dani) Bellmer, associate professor in biosystems and agricultural engineering, was honored with the Halliburton Outstanding Young Faculty Member award. The Halliburton Foundation's support for faculty awards and development in the College of Engineering, Architecture and Technology has been continuous since 1982. The purpose of this award is to recognize and encourage outstanding contributions by faculty in engineering, architecture and engineering technology.

Bellmer is involved with several research projects ranging from biomass-based energy to developing new food products. She has been at OSU for six years and was recently granted tenure. She was presented this award in August at the College of Engineering, Architecture and Technology fall faculty meeting.

## Sam Harp



Sam Harp, associate professor and Sr. Applications Engineer, was honored with the Faculty Excellence Award in University Extension, International and Economic Development at the annual fall convocation on September 22, 2003.

Harp was selected by a committee of OSU representatives from research, instruction, staff, administration and a representative from the city of Stillwater. This award recognizes Harp's dedication and innovative work as part of the OSU Applications Engineering program.

## BAE Faculty Members Receive Promotions!!!

Dani Bellmer to associate professor  
Tim Bowser to associate professor  
Marvin Stone to regents professor

### BAE Clothes Line

Biosystems and agricultural engineering's ASAE student organization is selling polos and T-shirts. They look great and would make a wonderful gift.

**Polos: \$25.00**

**T-shirts: \$12.50**

You can purchase these items from 111 Agricultural Hall or contact the department at (405) 744-5431.

# Meet The Master's Students



The graduate students seeking a Master of Science degree, top row from left to right: Saleh Ashaghatra, Bhaskar Rao and Kyle Vandale. Bottom row from left to right: Daniel Huang, Harish Bangera, Kim Hornbuckle and Julian Cacho. Students not pictured are: Kean Liew, Becky Ostermann, Ramesh Vishwanathan, Carly Washmon and David Zavodny.

Each semester we select a group to highlight as a way of introducing our alumni and friends to faces in the department. This semester we are introducing our current Master of Science graduate candidates.

Saleh Ashaghatra, from Saudi Arabia, is working for his master's degree in the biomechanical option. He expects to graduate in December 2003.

Harish Bangera began his quest for a master's degree in the biomechanical option in the fall of 2003. He had four years of industry experience with major machinery in Bombay, India, before coming to Oklahoma State University. He is a native of India.

Mindanao State University.

Kim Lewis Hornbuckle of Edmond, Okla., is pursuing a master's degree focusing on the environmental and natural resources option. She presently is working as a research engineer for Mike Kizer.

Entering the program in the fall of 2001, Daniel Huang, from Taiwan, is working toward his master's degree specializing in food processing and engineering.

Kean Liew came from Malaysia to attend OSU. He graduated in May 2002 from the university with a Bachelor of Science in chemical engineering and entered the master's program in the summer of 2002 focusing on the food

processing option. Julian Cacho, from the Philippines, entered the master's program in August 2003, specializing in irrigation and drainage systems engineering. He presently has two bachelor's degrees, one in agricultural engineering, the other in civil engineering. He taught for three years in the Philippines at

processing option.

Becky Ostermann, from Wyoming, expects to graduate in May 2004 from the master's program with a food processing option. She is the department's undergraduate recruiter and a class lecturer.

Bhaskar Rao, of India, is pursuing a Master of Science degree focusing on the biomechanical option. He began in this program in the fall of 2003.

Kyle Vandale entered the master's program in August 2001 with an emphasis on biomechanical instrumentation. He currently is working in the department's sensor laboratory.

Before pursuing a master's degree with a biomechanical option, Ramesh Viswanathan, from India, spent four years working in industry. He began in the master's program in August 2003.

Carly Washmon, of Woodward, Okla., entered the program in the spring of 2000. Since that time, she has worked as a department research engineer, been employed at NTECH Industries Inc. in Stillwater, and is presently working at the Department of Agriculture in Oklahoma City.

David Zavodny retired from the company that builds Ditchwitch machinery, Charles Machine Works in Perry, his hometown, in early 2003. He is currently a research engineer just beginning in the master's program in August of 2003 concentrating on the biomechanical option.

We are proud of our master's candidates and wish them the best in their degree quests.

## The BAE Tailgate Party Hosts Fun, Food and Friends for the Homecoming 2003 Celebration

The department hosted a tailgate party on October 4, 2003, at the BAE laboratory. The participants enjoyed hamburgers and bratwursts with all the extras while they spent time socializing.

This tailgater was a great success with more than 60 attendees. Many of our current students, staff and faculty attended.

We were happy to welcome back alumni Chad Fisher, Scott Henderson, Jake Holloway, David Holt, Bron Howard, Clint Imel, Shea Pilgreen, Scott



Ron Elliott socializes with alumni and students at the tailgate party before the OSU game against the University of Louisiana-Lafayette Ragin' Cajuns.

Schneider, Harold Springer, Travis Tsunemori and Elizabeth Willoughby. Also attending were Larry Roth, emeritus faculty, and Levi and Curtis Johnson's parents.

We apologize for anyone we have inadvertently left off the list.

Later in the day, the Cowboy football team did their part with a 56-3 win over Louisiana-Lafayette.

Marvin Stone thanks the attending alumni for filling out the postgraduate ABET survey during this gathering.

# Student Enrollment is on the Rise

By Cathy Herren  
Contributing Writer

The Oklahoma State University Department of Biosystems and Agricultural Engineering increased undergraduate enrollment 90 percent to 95 students over the last four years.

Biosystems and agricultural engineering's enrollment surge may be partially due to recent course changes. The department's curriculum was adjusted last year.

"Our department instituted a new curriculum in which students enroll in one biosystems and agricultural engineering class every semester for their first four semesters," said Rebecca Ostermann, department lecturer and recruiter. "I think this has helped with our retention."

OSU's total enrollment at both the Stillwater and Tulsa campuses increased by only 11 percent during the same time period, according to the Office of Institutional Research. This makes the increase in the department seem particularly large.

The increase places demands on the department's resources. Some adjustments will need to be made. For example, to accommodate the increase in students, the department may need to create additional sections of some lab classes, said Ron Elliott, department head for the biosystems and agricultural engineering department.

"We are excited about the increased enrollment," said Elliott. "We realize it presents new challenges for us, but are confident we can continue to provide the same high quality education for our students."

The department's high educational standards result in nearly 100 percent job placement, making it a good choice for prospective students, Ostermann said. The department's relatively small size gives its students an opportunity to gain applied experience in their field.

Jake Holloway, a 2002 biosystems and agricultural engineering alumnus, works as a project engineer for the sustaining engineering department at Frank W. Murphy in Tulsa. He credits his experiences in the department for supplying him with the skills he needed to obtain this career.

"I was a desirable job candidate because I possessed not only an engineering background, but because of the hands-on experiences I was able to bring to the job," said Holloway. "The department has historically been smaller and more hands on



*As hands fly to the air, Glenn Brown, professor in biosystems and agricultural engineering, engages students in his Heat and Mass Transfer class by asking questions and involving each student.*

compared to other engineering disciplines."

Students receive both theory and applied training through their coursework. Classes at the freshman and sophomore level are designed in a series so students will have one departmental class each semester for their first two years. Previously, students only had departmental classes their first and fourth semesters at OSU.

Data Analysis in Biosystems Engineering, Experimental Methods in Biosystems Engineering, Introduction to Engineering in Biological Systems, and Physical Properties of Biological Materials serve to connect BAE students through team projects and laboratory experiments.

These courses have given Joe Biggerstaff, biosystems and agricultural engineering junior, a better understanding of his major.

"When you have a departmental class every semester you learn what your major is about early on," said Biggerstaff. "You have hands-on application and can see how basic classes apply."

These hands-on experiences allow students to develop camaraderie and form study groups within their department, Ostermann said. These experiences help students succeed academically.

"You get to meet people you can work

with in your other classes," said Ryan Haar, biosystems and agricultural engineering sophomore. "It is helpful when you take basic engineering sciences."

Haar began the series of classes in the largest freshmen class the department has experienced in recent history.

The department's freshman class has been significantly larger during the past three years according to enrollment records. The fall 2003 freshman class has nearly 50 percent more students than the fall 2000 class did.

"Through proactive recruiting, we've been able to attract many students who are interested in not only agricultural mechanics or water quality, for example, but who are also aware of the science and math curriculum that comes with the degree," said Holloway. "By informing prospective students of the academic challenges of the major, the department has been able to increase retention."

Elliott credits Becky Ostermann's efforts as a significant factor for the enrollment increase. Ostermann said she shares her enthusiasm and love for the program with prospective students.

"I think going into biosystems and agricultural engineering was one of the best decisions I have ever made," she said.

# Alumni Success Stories

## Michael Calavan 1972

Michael Calavan completed his Bachelor of Science in agricultural engineering in 1972.

After graduation, Calavan entered the United States Army as a second lieutenant and served for two years.

Calavan has worked for the U.S. Army Corps of Engineers since 1974 and is currently an area manager. This position includes operations and maintenance of civil works projects in Oklahoma and Kansas. He was the operations manager for Tenkiller, Eufaula and Texoma lakes for varying periods of time.

“Work for the Corps has been diversified

and interesting,” Calavan said. “Being manager of operations and maintenance of some of the largest civil works projects in our area has been very gratifying and challenging.”

He has been married to his wife Kay for 34 years and lives in Muskogee, Okla. He has two sons, Jay and Dusty, and a daughter, Shelly.

His grandchildren, Carson, 4 years old, and Conner, 2 years old, are both already planning to attend OSU.

Shelly and her husband Justin, both graduates of the University of Oklahoma, are expecting their first child in April.

## Robert Hamilton 1973

Robert Hamilton graduated from Oklahoma State University in 1973 with a Bachelor of Science in agricultural engineering.

“My engineering degree from OSU in December 1973 has kept me employed from January 21, 1974, to this date without a single layoff,” Hamilton said.

Hamilton started working with Ralston Purina Company Pet Food Group in 1974 and has remained with the company in its various forms. He currently works on

installation of capital projects in existing plants, such as Ralston, Alpo and Friskies, across the nation. This company is now known as Nestlé Purina Pet Care.

Hamilton has been responsible for the design and construction of two new plants in Lubbock, Texas, and Statesville, N. C.

Hamilton and his wife Kathy, a teacher, have been married for 29 years and have a daughter Jennifer, who is a senior at Baylor University. He currently lives in St. Louis, Mo.

## Douglas W. Toews 1972

Douglas W. Toews graduated from Oklahoma State University in 1972 with a Bachelor of Science in agricultural engineering.

After graduation, Toews became a Naval flight officer and flew a carrier-based A-6 Intruder aircraft for six years.

He returned to his engineering educational background when he worked for the Williams Supply Company for two years as an irrigation engineer. He then joined the USDA – SCS as a field office engineer developing resource conservation in California for 20 years.

Toews, a professional engineer since 1984, currently is working for the USDA – NRCS as a state conservation engineer for resource conservation in Hawaii.

Through resource conservation engineering, Toews has had the opportunity to work on environmental problems including erosion control, flood prevention, disaster recovery, and irrigation water supply and management.

Toews was recognized as the NRCS Federal Engineer of the Year for the Western States in 1991.

OSU biosystems and agricultural engineering has been a Toews’ family tradition as his brother, Darryl, graduated with a bachelor’s degree in agricultural engineering in 1975, and his nephew, Matthew, is an OSU junior in the department.

Toews is planing to marry Gwendolyn Gilbert. He resides in Honolulu, Hawaii.

## Richard Punnett 1977, 1978, 1984

Richard Punnett obtained three degrees in agricultural engineering from Oklahoma State University, specializing in soil and water. He graduated in 1977 with his bachelor’s degree, in 1978 with his master’s degree and then completed his doctoral degree in 1984.

Punnett retired from the Army Corps of Engineers in September 2003 after 30 years. During that time he served in the Huntington District in West Virginia and in Jacksonville District in Florida.

In these areas, he conducted computer modeling for water quality purposes. In Huntington, he served as the Chief Reservoir Control for six years.

His responsibilities in Jacksonville included being the lead Hydrologic Engineer on a study to restore the Everglades, America’s greatest wetlands. As a result, congress approved the \$8 billion restoration plan.

He is currently the founder and president of the consulting firm, Hydrologic Realities Inc. He has remained involved with the Everglades studies through computer modeling.

Throughout his career, Punnett has received numerous awards including military honors and the Commanders Award for Civilian Service and the Superior Civilian Service Medal.

Punnett’s three sons, Clay, David and Lee, each served in the first Gulf war. He and his wife Debbie live in Jacksonville, Fla., and were married in 1990.

## Moved?

Keep the BAE Update updated so you don’t miss a single issue.

Please contact us at:

**BAE Update**

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**baenews@okstate.edu**

# 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.

Name \_\_\_\_\_  
 Home Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Home Phone \_\_\_\_\_ Fax \_\_\_\_\_  
 Business Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Business Title \_\_\_\_\_  
 Business Phone \_\_\_\_\_ Fax \_\_\_\_\_  
 E-Mail Address \_\_\_\_\_  
 Work Description \_\_\_\_\_

What year did you get your biosystems and agricultural engineering or mechanized agriculture degree(s)?  
 BS \_\_\_\_\_ MS \_\_\_\_\_ Ph.D. \_\_\_\_\_

Other Information \_\_\_\_\_  
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## Glenn Carlson 1967, 1970

Glenn A. Carlson received his bachelor's degree in agricultural engineering in 1967 and his Master of Science in water resources in 1970, both from Oklahoma State University.

He has continued his education through Public Works Civil Engineering seminars and short courses with specialization in traffic engineering and roadway design.

Carlson has worked for several companies since graduation from OSU, including

Bernard Johnson, Turner Collie and Braden, Cobourn – Linseisen, and Binkley and Barfield. Currently at Binkley and Barfield Carlson is the director of transportation where he develops highway designs.

He has worked as design manager for freeway, toll way and urban roadway projects in the greater Houston area. Some of his clients include the Texas Department of Transportation, METRO, Toll Road Authority

and Harris County.

He retired from the U.S. Army Reserve as colonel, and graduated in 1988 from the U.S. Army War College corresponding studies course.

He and his wife Linda have two children, daughter Valerie Mixon, who teaches in a public middle school, and son Tyler Carlson, who teaches in public high school. Carlson and his wife live in Cyprus, Texas.

## Roger Gose 1973, 1974

Roger Gose, of Stillwater, Okla., has two degrees from Oklahoma State University in agricultural engineering: a Bachelor of Science in 1973 and Master of Science in 1974.

Gose is principal in Gose and Associates of Stillwater, Okla., and has provided design and planning of residential and commercial

development in the area since 1983. He also provides land and construction surveying services and processes development applications through city hall.

Gose is currently involved in land development as a principal and in residential construction with his daughter, Laura. He is

the president-elect of the Oklahoma State Home Builders Association assuming the presidency in 2004.

Gose's son, Stephen, is currently a civil engineer in Dallas with Kemley-Horn. Laura, a junior at OSU, was recently admitted into the professional program for interior design.

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## Mark Your Calendar

**Dec. 9-13**

**Finals Week**

**Dec. 13**

**Fall Commencement**

**Dec. 15-26**

**Winter Intersession**

**Dec. 24-Jan. 1**

**University Holiday**

**Jan. 12**

**Spring Semester  
Begins**

**Jan. 19**

**Student Holiday**

**Mar. 5-6**

**ASAE Regional  
Preprofessionals  
Meeting**

**Mar. 15-19**

**Spring Break**

**Apr. 3**

**Student Banquet**

*BAE Update* is published each semester. It informs alumni and friends of the activities in the Department of Biosystems and Agricultural Engineering.

We invite you to submit questions, comments, articles, ideas, etc. to:

### *BAE Update*

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