



# a regular report on accomplishments

## Herd Family Endows Petroleum Engineering Department

Texas Tech University accepted a \$15 million donation from alumnus **Bob L. Herd** to the Department of Petroleum Engineering. The money will be used to endow the department. Herd's donation will result in the first naming of an academic department on campus, the Bob L. Herd Department of Petroleum Engineering.

Herd, a 1957 petroleum engineering graduate, is the founder and operator of Herd Producing Company in Tyler. He was named a Distinguished Engineer in the College of Engineering in 1995 and was recognized as a Distinguished Alumnus in 1994. Herd credits Texas Tech for his success.

"My family and I are pleased we are able to help Texas Tech provide the educational foundation for future petroleum engineers like it provided me many years ago," Herd said. "It was this education that made this donation possible."

**Chancellor Hance** praised Herd for making the education of future generations a priority.

"We are honored to name our successful petroleum engineering department after one of our distinguished graduates," Hance said. "The

generosity of alumni like Mr. Herd allows our institutions to continue providing excellent educational opportunities."

"We are proud of the exceptional success of our alumnus in the petroleum industry," said **Pamela Eibeck**, dean of the College of Engineering. "His generosity to the department is transformative and will allow the program to provide one of the nation's best quality petroleum engineering educations to our students into the future. We are truly grateful for his willingness to give back to the petroleum engineering department."

Department Chairman **Lloyd Heinze** says Herd has made a significant mark on the petroleum industry.

"He set a high standard for others to give to the industry as well as back to Texas Tech. We are proud to call him one of our Distinguished Engineers," said Heinze.

Texas Tech produces 10 percent of the U.S. petroleum engineering graduates each year. The graduate program in the department is ranked in the top ten petroleum engineering graduate programs in the United States by U.S. News & World Report.



Texas Tech University accepted a \$15 million donation from alumnus Bob L. Herd to the Department of Petroleum Engineering at a recent press conference.

Tech Welcome for new students was held at the beginning of the Fall semester.



## Student Accomplishments

● Four students from Texas Tech University's Department of Animal and Food Sciences gained valuable international experience this summer as they taught a series of special horsemanship clinics in Germany, Switzerland and the Czech Republic. "It was a great experience for the students to learn how to teach the skills they have learned in the Ranch Horse Program here at Texas Tech," said Kris Wilson, who serves as coach of Tech's award-winning Ranch Horse Team as an assistant professor of animal and food sciences. "Having the opportunity to do that internationally with a culture and language barrier was difficult, but rewarding."

Among those participating this year were **Robin Morris**, a graduate student from Colorado City; **Kevin Burns**, a senior from Clovis; **Alicia Daugherty**, a sophomore from Alpine; and **Brianne Aucutt**, a junior from Clovis.

● The Health Organization Management Program was engaged by the Government of Canada to serve as a consultant in management for the BC health authorities. Six MBA students were accompanied by Professor Timothy Huerta and conducted 40 hours of meetings with health care executives to discuss and provide deliverable solutions to the executives of the Provincial Health Service Authority, the Vancouver Coastal Health Authority and the University of British Columbia. Students attending were **Vijay Narendran**, MD/MBA; **Matthew Bell**, MBA/HOM concentration; **Jessica Drake**, MBA/HOM concentration; **Claudia Ellis**, MBA/HOM concentration; **Betsy Frederick**, MBA/HOM concentration; and **Tamaryn Parks**, MBA/HOM concentration.

## Texas Tech Paleontologist Contributes to Flying Drone Design Based on Prehistoric Flying Reptile

A Texas Tech University curator and an aeronautical engineer from the University of Florida have developed a 30-inch robotic spy plane modeled after an unusual 225 million-year-old pterodactyl.

The drone, featuring a strange design of a rudder at the nose of the craft instead of the tail, would gather data from sights, sounds and smells in urban combat zones and transmit information back to a command center.

This concept was presented at the Annual Meeting of the Geological Society of America in Houston.

According to paleontologist **Sankar Chatterjee** of Texas Tech and Rick Lind of the University of Florida, this project will demonstrate a next-generation capability of sensor emplacement using a pterodactyl as the model animal.

The unmanned, sensor-packed craft in development could soon be demonstrated using existing materials and actuators, the researchers said. Pterodrone, the military's next generation of airborne drones, won't just be small and silent – they'll alter their wing shapes using morphing techniques to squeeze through confined spaces, dive between buildings, zoom under overpasses, land on apartment balconies or sail along the coastline for surveillance.

Pterodactyls lived 228 to 65 million years ago from the late Triassic Period to the end of the Cretaceous Period, Chatterjee said. They dominated the Mesozoic sky, swooping over the heads of dinosaurs. Their sizes ranged from a sparrow to a Cessna plane with a wingspan of 35 feet. Their bodies featured lightweight bones and an intricate system of collagen fibers that added strength and agility to their membranous wings.

“Nothing alive today compares to the performance and agility of these animals. They lived for 160 million years, so they were not stupid animals. The skies were darkened by flocks of them. They were the dominant flying animals of their time.”

Tapejara wellnhoferi, a pterodactyl from Brazil, featured a large, thin rudder-like sail on its head that functioned as a sensory organ. Though as big as a Canada goose, its strange design made it stand out from the Cretaceous crowd when it came to flying. This design showed promise as a model to develop into an unmanned aerospace vehicle called Pterodrone, which has superior agility to perform missions requiring aerial, terrestrial and aquatic locomotion.

“Since the discovery of a complete Tapejara in Brazil about 10 years ago, we've found they could actually sail on the wind for very long periods as they flew over the oceans,” he said. “They spent most of their time hunting for fish. By raising their wings like sails on a boat, they could use the slightest breeze in the same way a catamaran moves across water. They could take off quickly and fly long distances with little effort.”

Similarly, the drone will sail in the same manner.

Initially, Lind said he had his doubts about creating a drone built with a tail at the nose of the aircraft.

“A vertical tail on the head is a

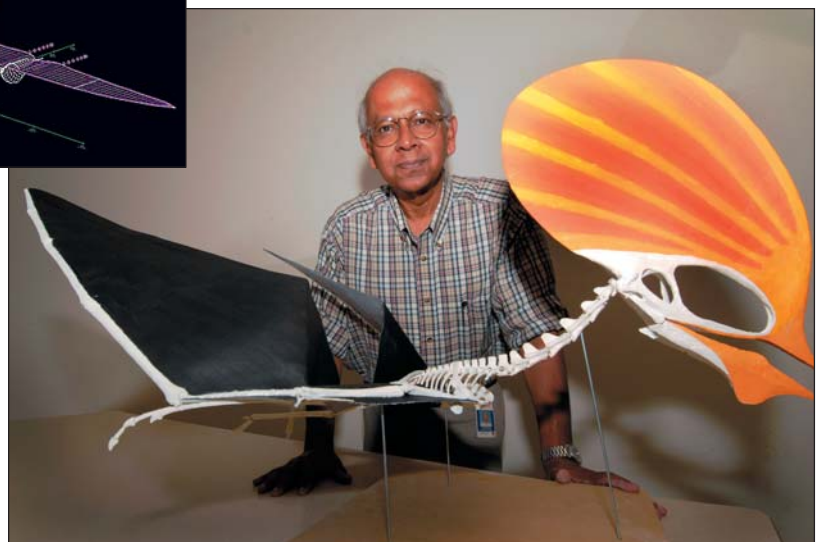
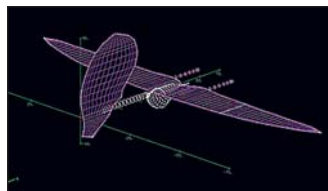
destabilizing influence, so we immediately questioned how Tapejara could survive in that configuration,” Lind said. “The issue of flight control becomes quite relevant as the animal, and thus aircraft, must alter its flight properties to take advantage of the turning capabilities presented by this vertical tail and yet remain stable.”

Chatterjee and Lind used computer simulation models and, based off the complete skeleton of the Tapejara, were able to unlock the secrets of flight from this strangely shaped flying animal.

“Sankar actually contacted me about three years ago after seeing a story on the Discovery Channel on our bird-inspired aircraft to inquire if a pterodactyl-inspired aircraft could also be feasible,” Lind said. “We shared some discussions for a while and then finally got serious this year once we had a common concept and could build upon that foundation.”

Bio-inspiration has led surprisingly to a wide variety of robotic design, especially small Unmanned Aerial Vehicles (UAVs) for urban environment that have taken cues from birds, bats and insects. Compared with a fixed-wing aircraft, a pterodactyl wing is a complicated structure of skin, hair, muscles, tendons, blood vessels and nerve tissue.

A team of students from the University of Florida will begin building the aircraft this fall.



## Tech study measures food safety in popular cooking shows

While the masterful chefs of the highly popular Food Network cook up plenty of finger-licking-good food, a new Texas Tech University study on food safety measures suggests that it's not a good idea for some of their stars to actually lick their fingers while cooking the grub.

These days fewer Americans learn how to cook during childhood or high school. High schools have scaled back on offering consumer science or what was traditionally known as home economics.

"Many people learn how to cook by watching these highly popular and entertaining cooking shows," said **Erica Irlbeck**, an instructor in the Department of Agricultural Education and Communications.

Last year researchers set out to determine the scope of the televised food safety problem by studying Food Network's heavy hitters: "30 Minute Meals with Rachael Ray," "The Essence of Emeril," "Everyday Italian," "Paula's Home Cooking" and "Semi Homemade Cooking with Sandra Lee." The Food Network is distributed to more than 85 million households in the United States and is considered the giant in food programming, ranked number one out of 50 cable channels.

Researchers analyzed 49 shows airing over a two-week period and used 17 different coded categories: six positive and 11 negative. Positive categories included hand washing, cleaning equipment, washing fruits and vegetables, adequate refrigeration, and use of a thermometer.

Negative behaviors included food from unsafe sources, failure to use a thermometer, use of food from the floor, failure to refrigerate perishables, failure to wash fruits or vegetables, inadequately washing equipment, sampling food or licking fingers, cross contamination of ready-to-eat or raw foods, and touching the face.

The results weren't exactly savory with 118 positive food safety measures and 460 poor food handling incidents. Among the most noticeable culprits were not washing fruits, vegetables and herbs properly and a lack of hand washing in general.

"These are important behaviors because if they are not followed, you can become ill," said **Mindy Brashears**, associate professor and director of the International Center for Food Industry Excellence at Texas Tech. "Many food borne illnesses can be prevented by proper food handling and that's why it's important these popular stars follow good food safety practices."

## Texas Tech Creates Industry-Supported Chair to Boost Region's Agriculture

**The College of Agricultural Sciences and Natural Resources** established an industry-supported endowed chair to increase the competitiveness of High Plains agriculture in an economy increasingly linked to international markets and guided by conservation-oriented policy. **Darren Hudson**, an award-winning agricultural economist from Mississippi State University, is the first chair recipient.

The \$1 million Larry Combest Endowed Chair in Agricultural Competitiveness will support proactive research focused on boosting the region's agricultural competitiveness and profits. Local producers will benefit from recommendations and conclusions on issues ranging from pricing to global markets. Hudson, a native of White Deer and a graduate of Texas Tech, will take over the reins of the university's nationally-recognized Cotton Economics Research Institute.

## TECHniques Center

In order to meet the growing needs of their student population, the department of **Student Disability Services** has initiated a variety of construction projects and outreach events. One such project is the complete renovation of the TECHniques Center on the east wing of the second floor of West Hall. From its beginnings in Wiggins Hall with a handful of students, the TECHniques Center has grown into a top learning center for students with learning disabilities and AD/HD in the United States.

## Vietnamese University Agrees to Joint Engineering Programs with Texas Tech

A delegation of Vietnamese officials representing the University of DaNang and DaNang University of Technology signed a Memorandum of Understanding to establish joint academic activities with the College of Engineering. The universities agreed to exchange faculty and students and could develop joint master's degree programs in engineering. The DaNang University of Technology is located within the University of DaNang.

## Financial Analyst Program Lauded

The CFA Institute announced that the Bachelor of Business Administration, Finance Major with Investments Emphasis from the **Jerry S. Rawls College of Business** has been awarded CFA Program Partner status. The Rawls College of Business is the first school in Texas to be recognized as a CFA Program Partner. Program Partners are recognized leaders for their coverage of a significant body of knowledge required of investment professionals seeking the "Gold Standard" in professional certifications for investment professionals, the Chartered Financial Analyst designation.

## Division of Outreach & Distance Education Officially a College

Officials at Texas Tech University recently announced the establishment of the College of Outreach & Distance Education. The new college will seek to offer more education options that reach more students than ever before.

Under the leadership of Dean **Matt Baker**, the existing Division of Off-Campus Sites (DOCS) and the Division of Outreach & Distance Education (ODE) have been brought together to form the new college. Baker said he is looking forward to what lies ahead.

“The most exciting thing is that we now have the ability to increase students’ access to Texas Tech’s world-class educational opportunities, no matter where those students reside,” Baker said. “Our programs are available to students in K-12 all the way to doctoral students and even lifelong learners.”

The new college will enable Texas Tech University to plan, implement, administer and assess distance and off-campus programs more efficiently and effectively. The college will aid the university in reaching its goal of 40,000 students by the year 2020. Texas Tech University currently offers more than 30 off-campus programs. At

present, ODE offers K-12 and college distance learning, which includes an accredited K-12 diploma-granting program — Texas Tech University Independent School District (TTUISD). The K-12 program is one of the largest of its kind in the U.S. ODE offers non-credit community outreach programs for K-12 students and adults, academic outreach programs for professionals in the form of short courses, certificate programs and conferences. It also hosts an Osher Lifelong Learning Institute (OLLI).

DOCS currently coordinates credit and non-credit programs offered through Texas Tech University at Abilene, Amarillo, El Paso, Fredericksburg, Highland Lakes and Junction.

Baker said goals for the new college include offering a larger array of undergraduate and graduate degree programs, continuing education programs designed to improve the quality of life of participants and continuing education that will retool a workforce that is in constant transition.

In 2009, TTUISD is poised to launch a Virtual High School where students will be assigned avatars that allow them to interact with other students and instructors in a learning community designed by faculty, staff and students at Texas Tech.

## Rawls College Defines New North Campus

The face of Texas Tech University’s main campus continues to change, as space is made for the new **Jerry S. Rawls College of Business** Building. A “Clearing the Way” ceremony was held Sept. 20 as university officials prepared to begin demolition of Thompson and Gaston Halls. The ceremony and demolition of the two buildings is the first step in the construction of the Rawls College of Business Building. The new business administration building will serve as an anchor for a new North Campus Gateway that will be an entrance to the campus from the Marsha Sharp Freeway.

## Engineering, Business Accept Major Gift

Texas Tech University scholarships, new students and a building campaign will benefit from a \$500,000 gift from ConocoPhillips. The company’s representatives were on hand as the gift was announced Sept. 23. ConocoPhillips’ corporate giving to Texas Tech, including all the associated subsidiaries and matching gifts, totals \$4.7 million. The College of Engineering’s ConocoPhillips Academic Success Bridge Program, the ConocoPhillips SPIRIT scholars program and the new Rawls College of Business Building and will receive funds from the gift. The SPIRIT scholars come from both colleges.

## Phi Beta Kappa Visiting Scholar Announced

Author and American foreign policy authority Loch K. Johnson was Phi Beta Kappa Society visiting professor at Texas Tech University from Sept. 28 – Oct. 1.

Johnson, Regents Professor of Political Science at the University of Georgia, gave a public lecture titled “Changing the World through Secret Intervention: The Use and Misuse of Covert Action as an Instrument of American Secret Foreign Policy,” on Sept. 29. In addition to his lecture, Johnson visited with students and faculty, met with classes and interacted with local Phi Beta Kappa members during his time at Texas Tech.

“Dr. Johnson has an international reputation as a top researcher in his field,” **Mary Jane Hurst**, president of Texas Tech’s Phi Beta Kappa chapter, said. “He is also well-regarded as a teacher, and his work in the field of international relations and political science make him an ideal visitor during the last weeks before the presidential election.”



Loch K. Johnson

## Rankings Rise for COE, Business and Law

The educational experience in the **College of Engineering** is only getting better, according to U.S. News & World Report's 2009 college rankings. In the magazine's yearly assessment of America's best schools, Texas Tech's undergraduate engineering program is now tied for 78, up from an 85 ranking for 2008 and from rankings in the 90s prior to that. The undergraduate program rankings are based on peer assessments only. **Pamela Eibeck**, dean of the college, acknowledged an increase in national visibility as more faculty write proposals and papers and more of Texas Tech's programs and research gain high-profile status.

Texas Tech University's **School of Law** and **Rawls College of Business** have garnered positions in the 2009 Princeton Review's "Best 174 Law Schools" and "Best 296 Business Colleges" respectively. The comprehensive reference books are available at book stores.

## Alumni Association Announces Capital Campaign

The Texas Tech Alumni Association launched a major capital campaign Oct. 10 to double the size of the Merket Alumni Center.

**John Scovell**, member of the Board of Regents and the National Board of Directors of Texas Tech Alumni Association (TTAA), announced the "Building on Tradition" Campaign to a capacity crowd gathered to honor **Peggy and Bill Dean** during A Matador Evening. The addition will include a Grand Reception Hall addition which will be named in honor of the Deans.

Bill, a professor, student organization sponsor and long-time executive director of the TTAA, and Peggy, a recognized educator and community volunteer, have given tireless hours to build lasting relationships with students, faculty, administrators, legislators, donors and friends of the university. The Deans, who hold five degrees from Texas Tech between them, were honored with the Lauro F. Cavazos Award for their lifetime of service to the university.

## Museum Receives Accreditation

The Museum of Texas Tech University recently received accreditation by the American Association of Museums (AAM). The designation is held by only 774 of the nation's 17,000 museums. Of those 774 accredited museums only 108 are university or college facilities. "Accreditation acknowledges the commitment by our museum staff to not only maintain a high level of professionalism, but to advance that practice to a higher plane," said **Gary Edson**, executive director of the museum. "Our accreditation is indicative of the institution-wide commitment to excellence at Texas Tech." The Museum of Texas Tech is an educational, scientific, cultural and research element of the university consisting of the main museum, the Moody Planetarium, the Natural Science Research Laboratory and the Lubbock Lake Landmark. The museum also offers master's level degrees in museum science and heritage management and a wide variety of educational program for the general public.

## Texas Tech, El Centro Partner to Benefit Students

El Centro College (ECC) in Dallas and Texas Tech University have received a \$4.9 million grant over two years from the U.S. Department of Education to establish a new partnership that will provide degree and career opportunities in environmental science for educationally underrepresented students.

Texas Tech and ECC will partner with the new Trinity River Audubon Center in Dallas, which will offer classroom and laboratory space to give students new research and field experiences. The center connects people of all ages to nature through our conservation and education programs.

## Faculty and Staff Accomplishments

● A Texas Tech University School of Law professor has been selected as one of 30 “Extraordinary Women in Texas Law” by Texas Lawyer magazine. **Susan Saab Fortney**, Horn Professor of Law, will be honored at a luncheon Nov. 14 in Dallas, as one of 30 female lawyers who have had the most impact on law and lawyering in the State of Texas over the last five years.

● Upon the initiative of **Barbara P. Weinlich**, assistant professor classics has become an institutional member in the American Academy in Rome. In a collaborative effort by the Department of CMLL, the School of Art, the School of Architecture, and the ICC, one the most prestigious teaching and research institutions in Europe, the American Academy in Rome, will provide a unique venue for both students and faculty at Texas Tech who pursue Ancient studies, Medieval studies, Renaissance and Early Modern studies, and Modern Italian studies. The American Academy in Rome will offer a Study Abroad connection for both undergraduate students who major in Classics and graduate students of Classics in CMLL. Moreover, faculty in Classics, Italian, History, Art, Art History, and Architecture will be able to apply for the Rome Prize as well as for residencies (2-4 months), affiliated fellowships (4-6 weeks), and the position of visiting

artists/scholars (2-8 weeks) at the Academy.

● A nationally recognized expert in agricultural education and strong proponent of distance education has been selected to lead Texas Tech University’s Department of Agricultural Education and Communications as its new chairman. **Steve Frazee**, a longtime professor in the Department of Agricultural Education and Communications and currently the college’s student services director, assumed his new duties in September. In this new position, he will have responsibility for programs affecting 215 undergraduate students, 70 graduate students and 10 faculty members.

● Award-winning agricultural communications educator **Cindy Akers** has been selected to lead Texas Tech University’s College of Agricultural Sciences and Natural Resources Student Services Center, formerly known as the Agricultural Recruitment and Career Center. Her new appointment took effect Sept. 1.

● **Jennifer Moore-Kucera** has joined Texas Tech University’s Department of Plant and Soil Science as assistant professor of soil and environmental microbiology. Moore-Kucera’s research will focus on soil microbial

ecology systems, specifically managed and natural landscapes. The new professor will be looking at soil biochemical attributes of soil quality and how biochemical transformations during decomposition affect plant growth, productivity and air and water quality. Prior to coming to Texas Tech, Moore-Kucera served as a postdoctoral soil scientist with Oregon State University’s Department of Horticulture.

● **Kerry Griffis-Kyle**, a wildlife ecologist from New Mexico State University, has been named an assistant professor in Texas Tech University’s Department of Natural Resources Management, according to officials with the College of Agricultural Sciences and Natural Resources. At Texas Tech, she will teach wetland ecology, wildlife techniques and introductory wildlife management. In the past she has led classes at other universities in cell and organismal biology, avian field ecology and environmental conservation. Prior to joining Texas Tech, Griffis-Kyle was on the adjunct and graduate faculty in the Department of Fish, Wildlife and Conservation Ecology at New Mexico State.

● **Courtney Meyers** has been named an assistant professor in Texas Tech

University’s Department of Agricultural Education and Communications. Meyers’s research focus will be on Web and print material evaluation, media coverage of agricultural issues, public awareness of agricultural topics, and dissemination of agricultural science information. Before joining Texas Tech, Meyers was a co-instructor and teaching assistant at the University of Florida-Gainesville and earlier a teaching assistant at the University of Arkansas-Fayetteville. She has worked as a graduate research assistant and focus group moderator.

● One of the founding leaders of Texas Tech University’s Cotton Economics Research Institute and a longtime professor and administrator in the Department of Agricultural and Applied Economics retired at the end of August. **Don E. Ethridge**, a groundbreaking agricultural economist who worked at the USDA and CIA, served as professor and chairman of the department from 1997 to 2005. In 1997, he was named director of the Cotton Economics Research Institute, and today still serves as its associate director. Ethridge, who over the decades has received grants in excess of \$4.5 million, has focused his research efforts on rangeland economics and economics of the cotton industry. Projects have

## Faculty and Staff Accomplishments

included economic analyses of brush control and other range enhancement practices, marketing/production systems in semi-arid lands, and price and weather risk analyses. In addition, he developed and organized economic research programs in fibers and oil crops with emphasis on the western U.S. coordination/cooperation/liaison work with cotton industry and other research groups and institutions.

● **Ellen Peffley**, professor in Texas Tech University's professor of Agricultural Sciences and Natural Resources and winner of the Chancellor's Council Award for Distinguished Teaching, is retiring at the end of August. She joined Texas Tech as a visiting assistant professor in 1984 and rose through the academic ranks over the next two decades. She was named a professor in the Department of Plant and Soil Science in 2001. She and her Texas Tech research team have been working with NASA's Advanced Life Sciences program to provide onions as a sustainable fresh food supply for astronauts on extended missions.

● College of Engineering Horn Professor **Henryk Temkin** recently received a Distinguished Service Medal from the Department of Defense and the Aron Kressel Lasers and Electro-

Optics Society (LEOS) Award from the Institute of Electrical and Electronics Engineers (IEEE). The director of the Defense Advanced Research Projects Agency (DARPA), an agency of the United States Department of Defense responsible for the development of new technology for use by the military, presented Temkin with the Bronze Secretary of Defense award for Exceptional Public Service, a Distinguished Service Medal. The award was in recognition of Temkin's service to DARPA for the past three years.

● Ph.D. candidate **Wayne Marko** and Professor **Calvin Barnes** attended the 33rd International Geological Congress in Oslo, Norway. They presented results of collaborative research projects in north-central Norway and Barnes was co-convenor of the symposium "Pre-collisional evolution of the Caledonian-Appalachian orogen."

● Texas Tech, Angelo State and North Carolina A&T researchers have recently won a three-year National Science Foundation grant to study changing societal attitudes towards water scarcity as affected by ethanol production and increasing groundwater depletion of the Ogallala Aquifer. Co-PI **Lucia Barbato** is associate director of the Center for

Geospatial Technology and is responsible for the Geographic Information Systems (GIS) analysis component. Collaborator **Colleen Barry-Goodman** is director of the Earl Survey Research Lab in the Department of Political Science and is responsible for managing the survey. **Jeffrey A. Edwards**, formerly of Texas Tech, and **Lyubov A. Kurkalova**, are economists and PI and Co-PI respectively from the NCAT Department of Economics and Finance. Co-PI and geographer **Gary Pumphrey**, a graduate of Texas Tech University, will represent Angelo State University.

● A Texas Tech group, founded by **Julie Isom**, **Céline Godard-Codding**, **Jaclyn Cañas** and **Kendra Rumbaugh** has now become an official chapter of the National Association for Women in Science. The chapter is called 'West Texas Association for Women in Science' (WT-AWIS). The mission of WT-AWIS is to champion the interests of women in science, technology, engineering, and mathematics across all disciplines and employment sectors. By breaking down barriers and creating opportunities, WT-AWIS strives to ensure that women in these fields can achieve their full potential.

● During the Democratic and Republican National Conventions, **Catherine L. Langford**, assistant professor of Communication Studies, served as a faculty mentor to high school students participating in Election Symposia sponsored by The Junior Statesmen Foundation. Langford was responsible for working with the various state delegations for both conventions so that high school students would have access to convention programming with their respective states. Langford also lectured on "Notions of Credibility in the 2008 Election" and "Fulfilling the Rhetorical Situation" at both conventions.

● The West Texas Mesonet team received the 2008 Larry R. Johnson Special Award from the National Weather Association presented during a luncheon at the NWA Conference in Louisville in October. **Wes Burgett**, operations manager, along with West Texas Mesonet team members **Brian Hirth** and **Ross Williamson**, and faculty director **John Schroeder**, comprise the team. The award is presented to an individual or a group to recognize unique events or extraordinary accomplishments which significantly contribute to operational meteorology.