College Embarks on Greatest Expansion Since 1928

TU is proud to unveil its newest expansion of the College of Engineering and Natural Sciences: Two new buildings that will facilitate TU’s continued advancement in engineering and science.

The two buildings include J. Newton Rayzor Hall, which will house the computer science and electrical engineering departments, and another facility to house the petroleum and mechanical engineering programs. The buildings will add approximately 72,000 square feet of additional teaching, research and faculty office space. A grand 1½-acre plaza will connect Keplinger Hall, Rayzor Hall and the petroleum and mechanical engineering facility. The additional buildings will mark the most significant contribution to the college’s growth since its 1928 founding.

Carrying on a father’s legacy

The lead gift for J. Newton Rayzor Hall was generously given by Evelyn Rayzor Nienhuis in memory of her father, who was an accomplished attorney and businessman. His lifelong passion for higher education was demonstrated through his generous gifts to several institutions.

Evelyn Nienhuis, who was previously a nurse by profession, grew up in Texas along with her sister, June. She is married to Lester Nienhuis, partner and founder of Surgical Associates, Inc., and they have two children. The Nienhuis’ generosity to TU has been extraordinary, answering needs in a variety of areas including tennis, women’s rowing, the annual fund and more. In 1999, the Nienhuis family also established the Nienhuis/Rayzor Presidential Scholarship Endowment Fund to provide merit-based scholarships for incoming TU freshmen.

Equipping an exciting future for CS and EE

J. Newton Rayzor Hall will be located between 4th and 5th Place, just east of the Allen Chapman Activity Center. The two-story gothic-inspired structure is designed to blend seamlessly with the campus’ existing architectural aesthetic. The building will have tower entrances at the southeast and northwest corners with dramatic vestibules leading into the building.

Rayzor Hall will include 24 integrated classrooms and teaching/research laboratories, 33 faculty and graduate student offices, two conference rooms, and five student commons areas with a student organizations office. The cost of the project is an estimated $20.4 million, including $2 million reserved for a permanent maintenance endowment.

J. Newton Rayzor Hall will be a welcome move for the computer science and electrical engineering departments, which have critically outgrown their current space in Keplinger Hall.

Much needed space for PE and ME

Similarly designed in appearance to Rayzor Hall, the petroleum and mechanical engineering building will fully accommodate the growing academic needs of the petroleum and mechanical engineering departments.

A lead gift for this building has been received, and a public announcement of this transformational facility’s new name will be made soon.

The building features 16 large integrated classrooms and teaching/research laboratories, 34 faculty and graduate student offices, four student commons areas, a conference room and a student organizations office. This facility is expected to cost $22 million, which includes a $2 million endowment reserved for the building’s permanent maintenance needs.

Currently, the petroleum and mechanical engineering departments are greatly restricted by the limited amount of space available for research and teaching. Since 2000, petroleum engineering has more than doubled its undergraduate enrollment — a testament to the quality of its nationally known programs. Mechanical engineering has received numerous national awards with its alternative fuel and fuel efficient vehicle designs, but continues to outgrow its limited research space.

A new era

When Keplinger Hall was dedicated in 1983, TU’s external funding for research totaled approximately $2 million annually. Since that time, research funding has grown to over $17 million for the 2007–2008 fiscal year; the vast majority of which is generated by the College of Engineering and Natural Sciences. As a result of this impressive growth, the college’s classroom space has been squeezed by its growing research enterprise. While the college has welcomed this surge in outside investment, it has created additional strain on departments’ limited physical space for research.

The addition of the two new engineering buildings will accommodate projected growth in enrollments, recruit and retain outstanding faculty, and provide state-of-the-art academic and research facilities to strongly position the college for its next 80 years.

ENS Celebrates 80 Years of Excellence in Education

Since its inception in 1928, the College of Engineering and Natural Sciences has enjoyed an international reputation for excellence. Students enrolled in the program have significant accomplishments in engineering and sciences, most notably in the petroleum industry.

From its impromptu beginnings in a janitor’s shed to the high-tech facilities of today (and tomorrow), the college has remained committed to educating students through faculty mentoring, hands-on projects and original research initiatives.

“We have grown because we have never failed to explore,” said Steven Bellovich, dean of the College of Engineering and Natural Sciences. “We have thrived because of our commitment to providing the best education to exceptional students. And we will continue to excel by building upon these core principles and concentrating on our successes.”

As Tulsa became the “Oil Capital of the World” in the 1920s, the fit between the oil economy and the University was natural. Retaining that core energy industry strength, the college has expanded and evolved over the years to include programs in many diverse engineering and science fields. Exciting new areas of expertise are emerging as the college leads innovation into the 21st century.

(See Selected Highlights on page 2)
Dear Friends,

This academic year marks the 80th anniversary of the founding of what is today the College of Engineering and Natural Sciences. In 1928, Tulsa was the Oil Capital of the World, and our college was originally created to meet the growing manpower needs of the petroleum industry, which was still in its infancy. Twenty students were expected to enroll in that inaugural class, but more than 50 actually appeared. That first class and its immediate successors did much to build the petroleum industry in the Mid-Continent and eventually throughout the world. In fact, the contributions of our alumni and faculty did much to help make the 20th century the Age of Petroleum.

Throughout the last 80 years our expertise in petroleum education and research has been a point of pride for the college and for the University. Our tradition of excellence in education continues to attract students from around the world. Our strong ties to industry have brought significant research funding to the college and enabled us to add a real world aspect to the education that our students receive. The seemingly insatiable demand for petroleum and natural gas, which the world is now experiencing, has once again focused the spotlight on our petroleum engineering program just as the growing demand for petroleum did in 1928.

Historically, being closely tied to the petroleum industry meant that the college’s enrollment was impacted by the periodic boom and bust cycles that characterized the industry. After the collapse of oil prices in 1983, a conscious effort was made to broaden the academic base of the college in an effort to diversify and improve the odds of producing more reliable enrollments. Programs in mechanical engineering, electrical engineering, chemistry and biochemistry, computer science, biology, physics, geosciences and chemical engineering were strengthened in order to ensure that our enrollments would not be so closely tied to fluctuations in the price of a barrel of oil. The strategy has paid off, and today the old “Engine School” has the largest enrollment among the three undergraduate colleges at TU.

Enrollment numbers, however, tell only part of the story. The quality of the students also is impressive. The average ACT scores for this year’s entering class is 28. A significant number are valedictorians or salutatorians of their graduating class, and 48 are National Merit Scholars. These students will undoubtedly do well in the classroom, but while in residence they, like their predecessors, also will participate in research, internships, competition for national scholarships and fellowships, and community volunteer projects. Our objective is to produce well-rounded graduates who can make significant contributions not only to their career field but also to society in general.

Yes, a lot has changed since the college opened in 1928, and those of us who have the privilege of staffing the college today benefit greatly from the solid foundation built for us by the college’s past leaders, faculty, alumni and friends. Please join me in recognizing the contributions and accomplishments of those who came before us as we continue building a legacy for the generations that will follow.

Best regards,

Steven Bellovich
Dean of the College of Engineering and Natural Sciences

Math Professor’s 1935 Poem Continues to Inspire

Notable Alumni Through the Years

My Favorite Professor

Students Win Best Design Proposal

Hulings Memorial Lecture to Feature Evolutionary Biologist

The Secret Life of Professors

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To contact us or to comment on this newsletter, e-mail amethyst-cavallaro@utulsa.edu, or call (918) 631-2656.

Selected Highlights
from the College of Engineering and Natural Sciences

1928

School of Petroleum Engineering opens with more than 50 students enrolled. R. C. Beckstrom becomes first dean. Ralph Kaufman appointed head of chemistry. Albert N. Murray named head of geology. Tuition was $75 per 18-week semester plus $12.50 for fees and $153 for room and board.

1929

Waite Phillips donates the Petroleum Engineering Building – Phillips Hall.
Surge in Enrollment: ENS Now Largest College on Campus

In the past, all one had to do was look at crude oil prices to know what enrollment trends would be in the College of Engineering and Natural Sciences. Today however, thanks to strategic planning, the college has diversified its academic programs to weather fluctuations in the petroleum industry.

“We still lean heavily on the oil industry,” said Steven Bellovich, dean of the college, “but today we are much more diversified and less affected by the price of a barrel of oil.”

After oil prices collapsed in the 1980s, the college leadership developed a strategic plan designed to preserve strength in the petroleum-related programs while building strength in other disciplines. Solid programs in mechanical engineering, electrical engineering, computer science, chemistry and biochemistry grew out of that effort and ensured that the college would be less adversely affected by the boom-and-bust cycles of the oil industry.

Bellovich said many universities closed or drastically reduced their petroleum engineering programs in the 1950s when the focus of the oil industry shifted overseas. Because of its unique history and established international reputation, the petroleum engineering program at TU survived, and it was well positioned to take advantage of the opportunities created by the oil boom of the 1970s and early 1980s.

“Enrollment reached record levels in 1982,” Bellovich said. “Then the price of oil fell drastically, and our enrollment numbers followed.”

The current oil boom has led to rapid growth in the college, adding to the solid enrollment outside the petroleum engineering department, and positioning Engineering and Natural Sciences as the largest college at TU.

“Currently, the industry is booming, our enrollments are sky rocketing again,” Bellovich said, “and I don’t think we’ve peaked yet.”

The Changing Face of ENS

If a picture is worth a thousand words, this photo from the 1937 Kendallabrum tells quite a story. Junior engineering student Ruth Ramsey (front and center) was the only female senior in her class and one of the few females in the early days of the college.

Thanks to Ruth and her pioneering sisters, the role of women in the college continued to grow slowly over the past eight decades. By 1958, there was still only one female engineering student listed in the yearbook.

Today, women are still in the minority in ENS but definitely have a presence in the college. According to the latest unofficial statistics, women currently account for about 30 percent of the ENS student body.

The increase in women is no accident. According to retired mathematics professor Donna Farrior, it took hard work to get girls and women interested in ENS majors.

“When I started working at ENS in 1977, the college was located on the North Campus, where there were few amenities and even fewer women,” Farrior recalled. “The women there were brave souls indeed.”

Farrior said fellow faculty member Gloria M. Eadors approached her about starting a chapter of the Society of Women Engineers on campus. They began the chapter with only four members, but Farrior said those members were very active in visiting schools and telling girls about the opportunities in engineering.

Farrior said faculty such as Shirley Pomeranz and Sharon Wilson worked hard to recruit women into the college over the years. They instituted the Sonia Kovalevsky High School Mathematics Day for ninth and tenth graders; hosted Brownie Day for third grade girls to learn about science and math; and continued to pursue additional outreach through the SWE Chapter.

The ratio of men to women isn’t the only change in the face of ENS over the past 80 years, though. The influx of international and minority students has ebbed and flowed over the years as well.

In 1931, four Venezuelan students enrolled in the petroleum engineering program, and three of that group became the first international students to earn degrees from the University. Today, about 25 percent of the ENS student body is international. Most of that population is in the graduate program.
S
ome might say it is a miracle. Others may think it’s merely a coincidence. But most agree there are very solid reasons why ENS has produced more Society of Petroleum Engineers presidents—eight in all—than any other university in the world.

“Tulsa is the birthplace of the world’s first SPE section,” said Mohan Kelkar, professor and chair of the Department of Petroleum Engineering. “The Mid-Continent Section just celebrated its 90th anniversary last year. So many of the industry’s foundations are in Tulsa, it makes sense that TU would be a center for leadership in the international organization.”

Kelkar said the college’s culture of service and strong connection to the industry has also influenced the presidential phenomenon. He said ENS and SPE both work to maintain its ties to the AIME, so they were able to grow together.

Until the late 1950s, SPE was just a standing committee of the American Institute of Mining Engineers (AIME), founded in 1871. In 1957, SPE created its own board of directors and became a full-fledged professional society while maintaining its ties to the AIME.

By the time Runyan took over its presidency in 1975, he was determined to make SPE a truly international society. He reached that goal.

“I was the first SPE president to go all the way around the world visiting chapters across the globe,” Runyan said. “I funded the travel myself and, although it took me away from my business a great deal, it was well worth the investment.”

Throughout his career as an independent oil producer, Runyan’s only real coworkers have been fellow members of SPE around the world. While Runyan was building a career in the late 1950s, SPE was still an infant organization, so they were able to grow together.

Runyan’s term was so successful he followed it by serving as the president of AIME in 1983. Today, Runyan lives in Midland, Texas, and owns the Texon Oil Company. He is still active in SPE and enjoys seeing ENS professors and students at meetings and technical conferences.

“There really aren’t that many petroleum engineers in the world,” Runyan said. “SPE helps professionals build those relationships that last throughout their careers. ENS’s visible presence in SPE continues to keep the ties between them strong.”

Koerner, who retired from Texaco in 1996, served as the SPE president in 1993 and, like Runyan, followed that service by becoming the president of AIME in 1998.

“The SPE presidency is actually a three-year commitment,” said Koerner, who lives in Castle Pines Village, Colorado. “You serve one year as president-elect; one year as president; and one year as past president. The AIME presidency is a four-year commitment.”

Koerner said he was honored to donate those years of service to the organization as described in the most influential part of his career.

More ENS alumni have served as SPE presidents than alumni from any other university in the world, including three consecutive years in the 1950s. The prestigious list:

Robert B. Gilmore (BS ’33) – 1955
Thomas C. Frick (BS ’33) – 1956
John P. Hammond (BS ’36) – 1957
H. Art Nedom (BS ’49, MS ’50) – 1967
Gerald E. Sherrod (BS ’50) – 1973
Ed Runyan (BS ’55, MS ’57) – 1975
James R. Jorden (BS ’57) – 1984
Roy H. Koerner (BS ’58) – 1995

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Ed Runyan (BS ’55, MS ’57) – 1975
James R. Jorden (BS ’57) – 1984
Roy H. Koerner (BS ’58) – 1995
A native of Raccine, Oklahoma, Koerner moved to Tulsa as a young boy when his father began working in the local defense industry. He first began considering engineering while writing a high school paper about his future career. At the urging of his father, he chose the petroleum engineering program at TU, which would allow him to live at home while attending college.

He joined the AIME/SPE chapter as a student in 1957 and was active until his graduation in 1958. He recalled that the chair of the petroleum engineering department, E. T. Guerners, insisted that alumni should not be reading SPE journal articles, but writing them.

“That set the bar high, and when I joined SPE as a professional, I enjoyed seeing how many TU faculty and alumni actually were authoring those SPE technical journals, books and articles,” Koerner said.

“But I also enjoyed meetings with my local chapter, which gave me a chance to talk to my cohorts as well as hear from the industry ‘superstars’ of the time.”

Like Runyan, Koerner visited SPE sections around the globe during his tenure as president, including visits to several hostile nations in which he faced the possibility of kidnapping or other violence. He is grateful that he remained safe and that his employer, Texaco, supported his SPE presidency by allowing him time to serve and sponsoring his worldwide travel.

Koerner said that TU’s world-record eight SPE presidents achievement is huge.

“It shows that TU attracts people with strong leadership qualities and attributes,” Koerner said. “Once those outstanding students are here, the college develops them to ensure they truly become leaders of the industry in the future.”

Throughout their own successful careers and leadership positions at SPE and AIME, both Koerner and Runyan have maintained strong ties to the ENS program. Each has generously given time and resources to ensuring the college continues to develop even more strong industry leaders.

“The program is so outstanding today,” Koerner said. “I’m glad I got in when I did. I don’t think they would let me in now.”

### 1992
- Lewis M. Duncan succeeds Y. T. Shah as dean.

### 1994
- Steven Bellovich succeeds Lewis Duncan as dean.

### 1998
- TU team wins first place in the Tour de Sol Competition for Hybrid Electric Vehicles. They will win again in 2002.
- Sujeeet Shenoi, professor of computer sciences, is named U. S. Professor of the Year by the Carnegie Foundation for the Advancement of Teaching - a first for TU and for the state of Oklahoma.

### 2000
- National Security Agency recognizes TU as a Center of Academic Excellence for Information Assurance Education.

### 2003
- Dr. Dale Teeters, professor of chemistry, receives a patent for a new method of making nanobatteries.

### 2005
- TU is chosen as one of only 17 universities to compete in Challenge X: Crossover to Sustainable Mobility, which was funded by General Motors, the Department of Energy and Chevron.
- A TU student team wins first place in the International Chem-E-Car Competition held in Glasgow, Scotland.

### 2007
- Two new engineering buildings are planned. They will house electrical engineering, computer science, mechanical engineering and petroleum engineering.

### 2008
- Petroleum engineering ranked fourth in the nation for the quality of its graduate programs.
- Mechanical engineering students win first place in the design proposal event of the Supermileage international vehicle competition.

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**Professor’s 1935 Poem Continues to Inspire**

A 73-year-old poem by TU Mathematics Professor W.E. Howard (pictured) continues to inspire 94-year-old ENS chemical engineering alumnus Fred McCullough (BS ’38), who still displays the framed verse in his home.

It was 1935 — the height of the Great Depression and seven years after the founding of what would later become the College of Engineering and Natural Sciences — and Professor Howard (whom students called “Hill on Wheels” behind his back) was teaching his final semester before retiring.

McCullough said he wasn’t sure if Howard had ever dedicated a poem to students before that 1935 semester. But he knew it was the only semester Howard did not flunk about half the class. In fact, every student in that analytical geometry course received a passing grade, a phenomenon that may have inspired the poem.

“He was an excellent teacher and definitely ‘old’ school,” McCullough recalled. “He would lecture for about 30 minutes, and then take a five-minute break to tell a story — usually about his interests in astronomy or the state of the TU football team — and then it was back to business. There was no foolishness allowed in his class.”

McCullough, a Tulsa native, was the only non-athlete at his high school to attend college. Although his high school teachers had pushed him toward pursuing college, McCullough did not have the family resources needed to complete his degree. To ensure he could continue his course work, McCullough secured a job as a groundkeeper at the University. Balancing a physically demanding job and an intellectually challenging major was rough, but that strong work ethic paid off when taking Howard’s mathematics courses.

“He was a demanding teacher,” McCullough said, “and, though he insisted that you work hard, he always took the time to explain the background of the mathematical concept and help the students solve the problems.”

McCullough said Howard was interested in students’ success beyond the classroom as well. When the astronomy buff learned that McCullough had an uncle working at the Lowell Observatory in Flagstaff, Arizona, Howard got in touch with some of his own contacts at the Observatory and made arrangements for the young student to tour the facility.

McCullough said Howard often stayed in touch with students throughout the years. Despite being known as a tough teacher, students knew they would eventually appreciate the tough classes.

“Many in my class continued on to graduate school,” McCullough said. “Those graduate programs were always glad to get us because they knew Howard had prepared us to succeed.”

McCullough’s career demonstrates precisely how well Howard prepared him for success. After earning his degree, McCullough worked for the Geophysical Research Corporation in Tulsa. As World War II began, however, the Draft Board of the day determined that McCullough’s expertise should be used toward the war effort. He was sent to Knoxville to work at the atomic level of chemistry. He later worked for DuPont in Oak Ridge, Tennessee, retiring as the chief chemist.

Today he and his wife, Dr. Etna McCullough, live in Oak Ridge, where they continue their interest and support of the college and university.

Professor Howard’s poem to his last class of students before his retirement in 1935.

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Students, it has been a great pleasure to me, Your friend, associate, and teacher to be. I have tried my best to help you prepare for the problems of life both here and there.

At times you thought me unreasonable, unfair, And felt I would drive you to utter despair. Please forget and forgive those days of strife, My aim was helping you prepare for life.

Now, as the school year comes to a happy close, Let us separate as friends and not as foes. Your friend and your helper I will ever be. Be very good, and kind, and always true.

I thank you so much, for your kindness to me, Your friend and your helper I will ever be. So now, good bye and good fortune to you, Wherever you go, whatever you do.

[Signature]

W. E. Howard

A 73-year-old poem by TU Mathematics Professor W.E. Howard (pictured) continues to inspire 94-year-old ENS chemical engineering alumnus Fred McCullough (BS ’38), who still displays the framed verse in his home.

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**Feature Stories**

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**TU Vision News | Fall 2008**
Notable Alumni Through the Years

TU’s College of Engineering and Natural Sciences has produced a large number of highly successful alumni in the last 80 years. It is not possible to present in this small space all of the notable ENS alumni. A few outstanding members from each decade are listed below to illustrate the wide variety of achievement among the college’s alumni.

Fred McCullough (BS ’38)
McCullough earned his degree in petroleum engineering with an emphasis in refining. Today, the retired chief chemist for DuPont lives in Oak Ridge, Tennessee, where he continues his interest in and support of the college. McCullough was responsible for the design and construction of the first large-scale plant for the production of radioisotopes: carbon 14, phosphorus 32 and Iodine 131, which are used in medical research and treatment. See page 5 for the story about McCullough’s experiences with one of the school’s math professors.

Calvin McKee (BS ’48)
McKee, who earned his degree in petroleum engineering with an emphasis in refining, served in World War II and the Korean War as a paratrooper. After his military service, he worked all over the world as a vice president of Gulf Oil. McKee later became president of Warren Petroleum and Anchor Gasoline Corporation. McKee has stayed active with his alma mater, serving as a ChE Advisory Board member, a TU trustee and was inducted into the TU Engineering Hall of Fame in 1980.

Arnold Brown (BSPE ’50)
As CEO, president and founding partner of KWB Oil Property Management, Inc., C. Arnold Brown bills himself simply as “petroleum engineer.” The billing reflects his work ethic and his background. He was inducted into the TU Engineering Hall of Fame in 1996 and the College of Business Administration in 2004.

Jorge Atalla (MS ’51)
Jorge Atalla was the first Brazilian student to graduate from the college’s petroleum engineering program. He returned to Brazil after graduation and began a historic career — providing energy to the world in a variety of ways.

In 1968, Atalla became the co-owner and president of Copersucar and pioneered the sugar-based alcohol industry. His company later became the first Brazilian enterprise to go multinational when it purchased Hill Bros. Coffee in 1976. By 1979, Atalla was the largest coffee bean grower and one of the largest sugarcane growers in the world.

In 1978, Atalla received TU’s Distinguished Alumnus Award. He later established the Jorge Wolney Atalla Decade Fund to provide institutional support for ENS.

James Westphal (BS ’53)
Most of James Westphal’s coworkers have doctorates from the world’s most prestigious universities. However, a bachelor of physics degree from TU was all the late Westphal needed to become professor of planetary science at Caltech (1961–2004); and principal investigator for the Hubble Space Telescope’s original Wide Field and Planetary Camera.

Best known for his seminal role on the Hubble Space Telescope, his gift for innovation earned him a MacArthur “genius grant” and led to his appointment as director of Caltech’s Palomar Observatory. He became the head investigator for developing the Hubble’s Wide-Field and Planetary Camera after he and a Caltech astronomer suggested it use the same kind of light detector built for the Galileo spacecraft’s mission to Jupiter. Westphal died in 2004.

Jarl Johnson (BS ’53)
Jarl Johnson has said that The University of Tulsa provided him with tools and principles that he has applied both in his personal life and in his career in the oil and gas industry. Armed with a degree in petroleum engineering, he spent half a century in the oil and gas industry as a manager, entrepreneur, executive and senior advisor. The high point in his career came between 1989 and 1995 as an owner and president of Diamond Energy, a Tulsa company that acquired semi-depleted oil fields and implemented secondary recovery projects. By relying on both Johnson’s engineering and business skills, Diamond Energy grew from a company with almost no production to the fourth largest crude oil producer in Oklahoma in five years.

Together with his wife, Naydene (BS ’51), the Johnsons have been members of TU’s President’s Council, Circle Society and the Golden Hurricane Club for many years. In 1996, they funded an endowed scholarship for the ENS Scholarship Fund to provide institutional support for ENS.

Doy Cole (BS ’62, MS ’64)
Doy Cole earned both a bachelor’s and master’s degree in chemical engineering at TU. He spent 36 years in domestic and international Engineering and Construction management starting with Standard Oil Co. of California followed by various engineering and construction contractors before joining the M.W. Kellogg Company in 1984, where he served in a series of executive positions.

Cole has been active at TU, serving on the President’s Council in 1994 and on the ChE Advisory Board.

Gustavo Coronel (BS ’55)
A student from Venezuela who graduated with a degree in geology, Gustavo Coronel served on the Board of Directors of Petroleos de Venezuela (1976–79), after a long international petroleum industry career in the United States, Europe, Venezuela and Indonesia. He founded and led (1990-2000) Pro Calidad de Vida, a civic organization created to promote good citizenship and ethics in government in Venezuela and several other countries in Latin America. From 1996 to 2000 he was the Venezuelan representative to Transparency International. In 1998 he was elected to the Venezuelan Congress before it was dissolved in 1999 by the new president of Venezuela, Hugo Chavez.

Coronel is now living in the United States and travels throughout Latin America, in an effort to restore full freedom and democracy in his native country, Venezuela. He has become an author and public policy expert and recently authored a CATO Institute study titled: “Corruption, Mismanagement and Abuse of Power in Hugo Chavez’s Venezuela.”

Thomas Russell (BS ’57)
At age 70, Thomas Russell decided to start a new business. “Some people like to hunt and fish. I like to build gas plants,” said the graduate of petroleum engineering with an emphasis in refining. Fortunately, Russell had already built a career doing that.

He founded T.H. Russell Co. in 1972 and built more than 300 plants nationwide before he sold it in 2000.

In 2004, Russell teamed up with his three sons — all mechanical engineers — to start Thomas Russell Co. It is a Tulsa-based company with worldwide customers. Despite his busy schedule, Russell continues to assist ENS by serving on the ChE Advisory Board and through the establishment of two ENS scholarship funds.
Since his retirement, Cole and his wife, SuzAnne (BA ’62), have spent time with their four grandchildren and traveled around the world seeking the perfect hike. He does some Christian nonprofit work and is active in the National Academy of Construction, into which he was inducted in 1999, the year he retired as executive vice president of the M.W. Kellogg Co.

**W. Murphy Distinguished Professorship in Mechanical Engineering**

**Bill Scoggins (BS ’70, PhD ’78)**

Bill Scoggins, who holds degrees in petroleum engineering from the college, currently serves as the 16th president of the Colorado School of Mines. He began his career with Mobil in 1970 and has been president of the International E&P and Global Exploration and a member of the Executive Committee of Mobil Oil prior to its merger with Exxon in late 1999. Following the merger, Scoggins served as executive vice president of ExxonMobil Production Company until his retirement in 2004. Soon after, he took the helm at CSM. Today, he also serves on the Board of Directors for Questar Corporation, Venoco, Inc., and Trico Marine Services, Inc. He is also a member of the Board of Directors of Colorado’s Renewable Energy Authority and the Colorado Oil and Gas Association as well as the National Advisory Board for DOE’s National Renewable Energy Laboratory.

**Ali Moshiri (BS ’76, MS ’78)**

Ali Moshiri is president of Chevron Africa and Latin America Exploration and Production Company, a newly formed organization based in Houston, Texas. He is responsible for upstream operations in Africa and Latin America. After graduating from The University of Tulsa with a bachelor’s and a master’s degree in petroleum engineering, in 1976 and 1978, respectively, he joined Chevron as a reservoir engineer and later as a drilling engineer. In 1983, he became senior production engineer with supervisory responsibilities in the Gulf of Mexico. From 1983 to 1987, he served as supervisor of Reservoir and Facilities Engineering for Chevron Energy Technology Company in Houston, with responsibilities supporting upstream activities.

In 1987, Moshiri joined Chevron Overseas Petroleum in the United Kingdom as manager of Technical Applications for exploration and production activities in the North Sea.

In 1991, he became supervisor of Petroleum Engineering for Chevron Overseas Company with responsibilities for petroleum engineering activities in international operations. Between 1992 and 1997, he held a variety of positions of increasing responsibility as manager of Petroleum and Facilities Engineering operations, including worldwide operational support, new opportunity assessment and operational feasibility, as well as support for petroleum and capital projects and with exit operations.

Moshiri was named general manager of Strategic Planning and Assets Evaluation for Chevron Overseas in 1997 with responsibilities over 10 international strategic business units, including mergers and acquisitions and new business development.

In 2000, he assumed the position of general manager and advisor to the vice chairman of the board for Chevron Corporation Exploration and Production.

In October 2001, Moshiri was appointed managing director of Chevron Latin America Exploration and Production, where he was responsible for upstream operations in Argentina, Brazil, Colombia, Trinidad, Mexico and Venezuela.

Moshiri has been chairman of the Venezuelan Association of Hydrocarbons and is a board member of the Council of the Americas, the Institute of the Americas and the Pan-American Development Foundation and the Trust of the Americas, Organization of American States.

He is married to Maria Luisa (Mist) Breischacher-Moshiri.

**Steve Largent (BS ’76)**

Steve Largent is the president and CEO of CTIA-The Wireless Association. After earning a biology degree from TU and breaking numerous Golden Hurricane football records, Largent became a record-setting wide receiver with the Seattle Seahawks for 14 years. He set six career records and participated in seven Pro Bowls and is a member of the National Football Hall of Fame. Largent also served for more than seven years as a member of the United States Congress, representing Oklahoma’s First Congressional District. He was inducted into the TU Engineering Hall of Fame in 2008.

**Jeffrey McDougall (BS ’84)**

Jeffrey McDougall is president of JMA Energy, the sixth largest privately-owned natural gas producer in Oklahoma. Founded in 1980, JMA Energy has enjoyed great success in exploration and exploitation of Oklahoma and Mid-Continent wells. McDougall has influenced the state’s independent producer industry, serving in various leadership roles in the Oklahoma Independent Petroleum Association. He also recently earned the Oklahoma Energy Explorers’ 2008 Outstanding Achievements Award for his contributions to the state and industry. McDougall graduated from TU with a degree in petroleum engineering and remains active at TU as a trustee and a key supporter of the college.

**Richard Alexander (BS ’87 MBA ’92)**

Richard Alexander has pursued his mechanical engineering and business background into continuing the legacy of Hasty-Bake, touted by most experts as the best charcoal ovens and grills on the market. Founded in 1948, Alexander purchased Hasty-Bake in 1994.

During his college career, Alexander was known for a great serve—not on the patio but on the tennis court. A lifetime Letterman member, Alexander played on the TU tennis team during his time on campus.

**Elizabeth Lund (BS ’87)**

Last May, Elizabeth Lund, who earned a mechanical engineering degree from TU, was named vice president of Product Development for Boeing Commercial Airplanes. In her new position, Lund is responsible for leading preliminary design of new and derivative airplanes and systems, and environmental performance strategy.

Lund also manages the overall research and development plan across Commercial Airplanes, and supports the Product Strategy and Advanced Technology organizations within Commercial Airplanes and Phantom Works.

Lund joined Boeing in 1991, after completing her master’s degree in aerospace engineering at the University of Missouri. She had held several key positions at Boeing before her recent promotion.

**Carrie L. Kirk (BS ’89)**

Carrie Kirk has made a career of being a restless entrepreneur. After leaving TU with a degree in mechanical engineering, she held sales and marketing positions with Naico Chemical Company and United Technology Corporation receiving countless achievement awards.

However, Kirk was determined to find greater challenges, and when she saw the opportunity to join a failing refrigerant recycling company, she knew she had found her niche. She left the security of her successful corporate career to work without compensation for the small struggling company in exchange for 51 percent ownership. Within 10 months, Kirk sold her shares in the company back to her partner for a considerable profit.

She immediately began her next company endeavor in 1997 by partnering with a venture capital firm to found TowerCom and serve as its president. TowerCom developed 283 towers, divesting 206 of those towers for a sum of $100.1 million with the remaining towers divested in 2007 at a comparably valuation.

Kirk left TowerCom and founded Southeast Towers in 2004 serving as its CEO with a plan to develop 175 telecommunications towers over three years. Her prior success and experience led to the company securing a $20 million equity commitment from a New York-based equity firm and a $25 million credit facility from Goldman Sachs within the first year. Southeast Towers quickly became the largest privately-held tower development company in the country.

In July 2007, the company and its 180 towers were sold for an undisclosed amount several months earlier than its goal and generated profits substantially exceeding plan. The company’s private equity investor realized 3.6 times its investment resulting in a 60 percent internal rate of return.

Since the sale, Kirk has been enjoying traveling with her husband, Nicholas Telesca, and gardening at their Atlanta home.

(Story continued on page 9)
My Favorite Professor

For the past 80 years, ENS professors have influenced the lives and professions of thousands of young men and women. The relationship between professor and student is one that we take seriously. It would be difficult to highlight every outstanding faculty member, but here are just a few who left their marks on students’ lives and the legacy of the College of Engineering and Natural Sciences.

J.J. Azar
Petroleum Engineering
Faculty member: 1965-2002

J.J. Azar joined the ENS faculty in 1965, after earning a Ph.D. degree in mechanical engineering. He served as the director of the University’s drilling research projects from 1974 to 1996 – an era of tremendous growth. Azar, a Lebanese immigrant who arrived in the United States as a 17-year-old, became a distinguished engineer, author and professor.

In 1997, Azar received the SPE Distinguished Achievement Award for Petroleum Engineering Faculty. In 1998, SPE also awarded him the Drilling Engineering Award, followed by a Distinguished Member Award in 2004. In 2004, Azar was inducted into the U.S. National Academy of Engineering. Today he lives in Houston near his family and conducts training seminars around the world.

Azar undoubtedly influenced thousands of students during his career. Azar met Robello Samuel in India in 1990 during a lecture. Impressed by Robello, Azar convinced him to enroll in the ENS graduate program and helped ensure his paperwork was in order. The two maintained their relationship and recently caught up on the book Drilling Engineering, currently a best-selling textbook.

Kermit Brown
Petroleum Engineering
Faculty member: 1966-1988

For more than 50 years, Kermit Brown contributed to the petroleum industry as an educator, researcher and consultant. He was then a petroleum engineer for Amoco for several years before earning his doctorate at the University of Texas at Austin. where, in 2000, he was recognized as a Distinguished Engineering Graduate. From 1966 to 1989, Brown served as an administrator at TU. He headed the petroleum engineering department, was the vice president of research and director of resources engineering. In 1976, he gave up his administrative positions to focus on teaching, which he did until his retirement in 1988. His teaching efforts garnered many awards over the years, including the Westhouse Teaching Award and Student Award for Outstanding Teaching.

Brown has written seven books on petroleum production. One book, Production Optimization of Oil & Gas Well by Nodal Analysis, is considered essential reading by many engineering programs. SPE honored him for contributions to the petroleum engineering industry with the John Franklin Carl award.

TU distinguished alumni Michael Wiley (BS ’72) best remembers Brown for his efforts to challenge students with eye-opening summer experiences.

Paul Buthod
Chemical Engineering
Faculty member: 1941-1986

Professor Paul Buthod (BS ’39, MS ’43) retired from the ENS faculty after being on campus for more than 50 years – first as a student, then as a highly respected faculty member.

“He was tough and expected a lot out of you, but that was okay, because you admired him so much.”

Flaxbart credits Buthod with helping him begin his career.

“He recommended me – as well as several other graduating students – for professional positions,” Flaxbart recalled. “He developed strong relationships with all the students, and you couldn’t help but want to meet his high expectations for you.”

In 2003, the Department of Chemical Engineering honored Buthod by naming its computer lab after him. Today Buthod is retired and living in Sanger, Texas, where he recently celebrated his 95th birthday.

Donna Farrior
Mathematics
Faculty member: 1977-78, 1993-2006

Donna Farrior earned her master’s and Ph.D. degrees from University of Alabama before she began teaching at ENS in the 1970s, when few women were students and even fewer were faculty in ENS. She and her colleagues worked hard over the years to encourage more women to become ENS majors.

When Farrior became the first advisor for TU’s first Society of Women Engineers chapter, it had only four members. Those four members, however, were enthusiastic about visiting with girls in the Tulsa community about opportunities in math and engineering.

For several years, Farrior helped organize the “Sonja Kovalevsky High School Mathematics Day” on campus for ninth and tenth grade girls. The days were filled with math workshops and visits from TU alumnae with interesting jobs involving mathematics.

“I’ve always felt that women would feel more comfortable choosing an ENS major if we could make human connections with them,” Farrior said.

Students of Farrior agreed that she maintained those connections during their college careers.

“Her classes were very hard,” said Joshua Buck. “But she was very nice and always took time to help students after class as needed. She always remembered me and greeted me in the building, even long after I finished her class.”

Today, Farrior is active in the Tulsa City-County Library’s Adult Literacy program. She said she enjoys reading many books she had put off reading for so many years.

Frank Manning
Chemical Engineering
Faculty member: 1968-present

Most of the ENS faculty members mentioned here are retired, but a story about favorite ENS professors wouldn’t be complete without Frank Manning, who recently began his 40th year on faculty at the college. Current professors say they can’t meet an ENS alumni anywhere in the world who doesn’t ask about Frank Manning.

A native of Barbados, West Indies, Manning earned his doctorate at Princeton University and taught at the Carnegie Institute of Technology before joining the faculty at TU. He chaired the chemical engineering department twice for a total of 14 years and taught virtually every undergraduate chemical engineering course available.

He is the author of several textbooks in the petroleum engineering discipline and more than 70 publications. He headed up more than 40 research grants or contracts and advised more than 25 doctoral students.

Manning has held leadership positions at local, regional and national levels in ASEE, AICHE and ABEF. He has consulted with companies around the globe and conducts reviews for both the EE and PE, in ChE examinations.

Manning’s teaching awards are numerous, including ENS’ Kermit E. Brown Award for Teaching Excellence in 1995 and the Outstanding Teacher Award in 1999.

Gloria Meadors
Chemistry
Faculty member: 1967-1991

Gloria Meadors began teaching chemistry at TU in 1967, spending many years in the classroom and in charge of the chemistry stock room. She retired in 1991.

Rachel Mason (MS ’97) has fond memories of a professor she credits with leading her toward a Ph.D. degree in chemistry.

“Learning was truly her first priority, and she did not suffer fools in her class,” said Mason, who is currently seeking a doctorate in chemistry at the University of Oklahoma. “Several years later, when I was nearly finished with my degree and wasn’t sure what to do next, Mrs. Meadors caught up with me and encouraged me to pursue a doctorate. She remembered my hopes and dreams and really wanted me to achieve them.”

One of Meadors’ greatest endeavors was beginning the Society of Women Engineers chapter at the TU campus.

“One remember when Meadors approached me about starting a student chapter of SWE,” said Donna Farrior, retired professor of mathematics. “This was when the Engineering College was out at the North Campus, and there were only a few women and very few amenities. Starting SWE was a great experience, and the students were very active.”

A dedicated “rockhound,” Meadors and her husband spent time seeking unusual and rare specimens for their own collections and to sell to collectors.
Wilbur Nelson
Chemical Engineering
Faculty member: 1930-1974

Wilbur Nelson was professor of refining and chemical engineering from 1930 to 1974. Considered the founder of the chemical engineering program, Nelson served as its first chair - a position he held for 24 years. Nelson remained active until a series of heart attacks ended his life in the late 1970s.

Nelson contributed greatly to the field of chemical engineering. He authored the classic textbook Petroleum Refinery Engineering and was a fellow of the AIChE. He also developed two indices still used by the industry today: the Nelson Complexity Index and the Nelson-Farrar Cost Index.

Professor Frank Manning has fond memories of Nelson as a teacher, colleague, and friend. "I remember one holiday when 'Doc' was in the hospital recovering from one of his heart attacks," Manning recalled. "I was in my office when the phone rang. It was Doc, and he asked for the department secretary. I reminded him that it was Good Friday, and she wasn't there. He said, 'You mean she's not back until Monday?' That's just how he was."

The chemical engineering department has an endowed scholarship funded to honor Nelson as well as an award named in his honor: the Kermit E. Brown Outstanding Teacher Award in 1996 as well as various other awards and recognitions.

Wallace Philoon
Chemical Engineering
Faculty member: 1964-1986

Wally Philoon taught in the chemical engineering department for 22 years. A graduate of the Massachusetts Institute of Technology, Philoon dedicated much of his career to teaching and continuing education.

Petroleum engineering alumni Joseph E. Magoto (BS ‘73) credits Philoon for much of his own career success. "The attention I received from professors [including Philoon] was not only educational, but enjoyable," Magoto said. "That attention made me want to study harder and resulted in a higher GPA."

Pat Hall, associate dean for continuing engineering and science education, remembers the time and effort Philoon coordinated and taught courses for the EIT (now called the OIT). Philoon also taught undergraduate courses in chemical engineering.

Philoon is a member of Sigma Xi and is widely recognized for his teaching and contributions to the chemical engineering community. He is currently an E-book accessible at The University of Tulsa.

Kenneth C. Weston
Mechanical Engineering
Faculty member: 1968-1995

"Professor Weston was the head of the committee that hired me into the department," said Ed Rybicki, current chair of the mechanical engineering department. "It would be hard to name all the accolades and teaching awards he received during his tenure at TU.

Weston, who worked with NASA on the Apollo Project in the 1950s, is described as a teacher who always puts the students first.

"At one point, we were required to have posted office hours on our doors," Rybicki recalled. "Weston posted hours as required but in big letters underneath, he wrote: STUDENTS ARE WELCOME ANYTIME: That's the way he was."

Weston wrote the book, Energy Conversion, which is currently an E-book accessible at The University of Tulsa Web site.

Since retirement, Weston has focused his time on traveling with his wife, Dr. Ruth Weston, also a published author.

Levi Gillen (BS ‘97)

"Levi is probably the most impressive overall guy I’ve met in my 24 years as a professor," said Professor Steve Tipton of the mechanical engineering department. "He was an outstanding athlete on a Division I football team and still managed to complete his work perfectly and on time. He’s also a fantastic musician and, despite all his talents and abilities, he is quiet and humble."

Gillen attended high school in Leoti, Kansas, where he excelled as a track star. He joined the Golden Hurricane football team as a walk-on and played defensive back for the team, setting a school record 140 tackles in one season. Gillen also excelled in the classroom, becoming an Academic All-American in ’96 and ’97.

After graduating in 1997, Gillen began his career at MC/Energy Manufacturing in Tulsa as a product engineer. In 2000, Gillen married and moved to the Kansas City area. Today, he works for Black & Veatch as a mechanical systems engineer for new nuclear power plant projects. He and his wife, Claire, have two sons and live in Olathe, Kansas.

Michael Ruffin (BS ‘99)

Few have been so talented at so much, but former Golden Hurricane basketball star Michael Ruffin represented TU as well on the court as he did in the classroom and community. Ruffin is the all-time Tulsa career leader in rebounds with 1,211 and blocked shots with 206, taking TU to the NCAA tournament three times.

He also earned a 3.72 grade point average in chemical engineering, was named a GTE/CoSIDA First-Team Academic All-America and was selected as the College Hoops Insider (CHI) Award 1999 Student-Athlete of the Year for basketball.

Ruffin has played professionally in the NBA for eight years. He was drafted in the second round by the Chicago Bulls in 1999 (32nd pick overall) and has also played for the Philadelphia 76ers, Utah Jazz, Washington Wizards and Milwaukee Bucks.

Along with his wife, Mistye, Ruffin was honored as one of Lifetime Television and The Wireless Foundation’s Champions for Change, a foundation aimed at raising awareness about all forms of violence against women. He was recognized by The Sporting News in 2006 as one of the top “Good Guys” in sports for his charitable endeavors. And he earned the Bulls’ 2002 Charles Lubin Award, honoring his outstanding commitment to community service efforts during his rookie season; the only rookie ever to receive the honor.

Daniel Wilson (BS ‘00)

Daniel Wilson, a Tulsa native who attended Booker T. Washington High School before coming to TU, is the author of four books, a robotics engineer, contributing editor at Popular Mechanics and now host of the cable television show, The Hints. On the show, which debuted on the History Channel July 10, 2008, Wilson takes viewers cross-country to “uncover the facts and history hidden within the incredibly complex systems of everyday life.” These complex systems include tattoos, beer and power tools.

Wilson earned a BS in computer science from TU where he worked with Professor Sandip Sen on research in Artificial Intelligence. A Cherokee native, Wilson was a participant in the OK-LSAMP program for his four years of undergraduate work starting with the summer before joining TU when he participated in a summer bridge program. He also participated in the Tulsa Undergraduate Research Challenge (TURC) and study abroad, spending a semester in Melbourne, Australia.

“Daniel is the modern man Mr. Robotto,” said J.C. Diaz, professor of computer science and mathematics. In addition to his degree at TU, Wilson also holds a doctorate in robotics from Carnegie Mellon University’s Robotics Institute. He wrote his award-winning first book, How to Survive a Robot Uprising in 2005 and has since published three additional tongue-in-cheek books about technology, including his latest piece, The Mad Scientist Hall of Fame.

Currently Wilson lives in Portland, Oregon, where he is working on several new books, including a children’s book on sibling rivalry entitled, “Bro-Jitsu.”
**CESE Dean’s Letter**

Since 2000, it has been my privilege to serve as associate dean of continuing engineering and science education (CESE). The program began about 30 years ago with only two continuing education classes: "Fluid Flow Projects: Two Phase Flow in Pipes" and a two-week "Advanced Petroleum Geology" short course. Since then, the program has grown and now offers 80 to 100 classes per year, conducted in more than 20 states and 20 countries. We serve 2,000 participants annually and take great pride in watching our graduates excel in their careers.

As the College of Engineering and Natural Sciences celebrates 80 years of excellence, we’re thankful for all of the faculty members who have mentored our TU alumni to become outstanding professionals.

Many current and retired faculty members have taught courses for CESE — Kermit Brown, Jim Brill, J. J. Azar, Frank Manning, Wallace Philoon and John Shadley, just to name a few — and their former students greatly enjoyed the opportunity to once again gain insight from their experience.

As we all know, progressing in our careers takes constant training, specialization and adjustment to new roles. We are lucky to have such a rich reserve of knowledge at TU to aid our ENS alumni in every stage of their careers. Through CESE seminars, workshops, conferences and certificate programs, our participants use real world examples and exercises that expand and enrich their base of knowledge. We also craft our programs with these goals in mind: 1) save time; 2) reduce costs; and 3) increase production and productivity through useful tools and tips provided in the program.

We offer noncredit programs, primarily in the petroleum disciplines, that are technical, non-technical or cross-disciplinary. In addition, CESE has classes and conferences in the areas of environmental science, mechanical engineering and computer security. A Professional Certificate Program was developed to help engineers and other technical professionals to move up in their careers through an Executive Leadership program (ELITE). The outcomes have been beneficial to both the companies and the individuals.

Our programs are designed to help professionals in industry to remain current in their field and may be certified to meet mandatory professional development hours. If you haven’t done so lately, I invite you to visit our Web site, www.cese.utulsa.edu, or give us a call at (918) 631-3088, to see how we can help you continue to advance in your career.

Best regards,

Pat Hall
Associate Dean for CESE

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### CESE Fall Schedule of Classes

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**Problem’s & Pitfalls in Joint Operating Agreements**

October 7-9, 2008

Houston, Texas

Instructor: Lewis G. M osburg, J. r.

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**Appraisal of Oil & Gas Properties**

October 15-16, 2008

Houston, Texas

Instructors: J ohn G. Gustavson, Edwin C. M ortiz

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**TU and CESE Sponsor Petroleum and Biofuel Conference**

The 15th annual International Petroleum & Biofuels Environmental Conference (IPEC) will be held November 11–13, 2008, in Albuquerque, New Mexico. The IPEC conference addresses the challenges facing the industry in exploration, production, refining and distribution of petroleum and presents the latest technological solutions to the environmental issues of today and tomorrow.

“Once again, oil and gas professionals will come together seeking technical, legal and regulatory solutions to various environmental issues in exploration, production and refining,” said Kerry Sublette, Sarkeys Professor of Environmental Engineering at TU and director of the Integrated Consortium for Energy and the Environment (ICEE), “I look forward to another successful meeting this fall and extend a cordial welcome to all interested individuals to consider attending and/or presenting at the conference.”

Some featured session topics include coalbed methane water treatment technologies, shale environmental issues, and geophysics for oil and gas environmental studies.

The conference also includes a workshop entitled, “Planning for the Use of Advanced Site Characterization Tools.” This workshop gives an overview of modern molecular biological tools (MBTs) theories and applications for the petroleum industry and how these tools can be applied to real world situations. Additionally, participants will learn about the various approaches that can be applied to further advance the understanding gained from MBTs, such as Bio-Trap samplers. The workshop instructors are Greg Davis and Dora Ogles of Microbial Insights, Inc. and Robert Priddle of Microspecrs, Inc.

This conference is organized by The University of Tulsa, Continuing Engineering & Science Education (CESE) and the Integrated Consortium for Energy and the Environment (ICEE).

It provides a unique opportunity for industry, academic, federal, and state representatives to join together and evaluate potential solutions to environmental regulatory compliance questions based on expert experience and sound scientific analysis. To date, more than 4,500 individuals from 25 U.S. states and 33 other countries around the world have attended IPEC.

Corporate sponsors of the conference include Chevron, Chesapeake Energy, ConsocoPhillips; Yates Petroleum Corporation; BEACON Environmental Assistance Corp.; Explorer Pipeline; Primary Natural Resources, Inc.; Samson Companies; Veolia Water Solutions & Technologies; ALJU Group; DeepEarth Technologies, Inc.; Devon Energy Corporation; ETEC, LLC/TECHSAS, Inc.; H2O Engineering, Inc.; and TRC Companies, Inc.

For more information, visit spec.utulsa.edu, or call (918) 631-3088.

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**Executive Leadership Program Important Updates**

Some exciting updates have been implemented for the Executive Leadership Institute for Technical Professionals & Engineers (ELITE) program to better serve participants. ELITE training gives forward-thinking professionals the necessary skills to excel in new positions as leaders and managers.

The ELITE program’s start date will move up to October 6, 2008 and run straight through eight months ending in May 2009. This new format allows for a shorter completion timeline without compromising the content of the program in any way. With the new format, ELITE will still have eight full modules, but reduce the time commitment by two months, as well as reduce the number of overnight stays per module.

CESE is also happy to announce that Glenn Koller has joined ELITE as a new facilitator. Koller will teach one-and-a-half days on “Leading a Risk-Intelligent Organization,” which covers the elements of sound risk assessment/management (RA/M) practices.
Along with the new initiatives, additional members have been elected to the ELITE Advisory Board to lead this innovative leadership program for engineers into exciting new directions. CESE and ELITE will benefit from such a distinguished group of engineering professionals. For more information about the ELITE certificate program, visit www.cese.utulsa.edu, or call (918) 631-3088.

ELITE board members pictured from left to right in the photo include: Bob Stratton, emeritus professor of electrical engineering; Jim Perrault, director of product development at McElroy Manufacturing, Inc.; ELITE Class of 2004; Steve Copeland, project manager, SCFM Compression Systems Co.; Bryan Guderian, vice president at Williams for Tulsa region/international E&P; Charles Baulak, director of the John Zink Institute; John Hale, associate professor of computer science at TU; William Digg, asset lead in the development department of Newfield Exploration; Ed Rybicki, Harry H. Rogers Chair in Engineering at TU; Jim Sorensen, senior associate dean for research at the College of Engineering and Natural Sciences at TU; and Ken Sellers, vice president of engineering at Gunnebo Johnson Corp.

Board members not pictured are Doyle Bishop, president and COO, Callidus Technologies, LLC; Wilson Busby, attorney with Merrill & Busby; Marlin Garrett, Technologies, LLC; Wilson Busby, attorney with Merrill & Busby; Marlin Garrett, Technologies, LLC; Pat Hall, associate dean for CESE, has been elected as a chair of the American Society for Engineering Education (ASEE) Professional Interest Council. Hall represents three divisions of ASEE and will serve for two years in this position and on the Board of Directors for ASEE.

CESE Outreach News

Thanks to all of the CESE alumni for stopping by the TU-CESE booth at the Society of Petroleum Engineers’ annual meeting in Denver, September 21-24! The conference was a grand success and it’s always wonderful to reconnect with our accomplished alumni.

Hall to chair ASEE—PIC V

In other good news, Pat Hall, associate dean for CESE, has been elected as a chair of the American Society for Engineering Education (ASEE) Professional Interest Council. Hall represents three divisions of ASEE and will serve for two years in this position and on the Board of Directors for ASEE.

CESE Partnership Highlight

As a service to CESE’s partners in continuing engineering education, in-company training programs are designed to offer customized training solutions for specific needs. CESE and The University of Tulsa are honored to work closely with some of the leading engineering companies in the world. In-company training has been increasingly recognized as the most cost-effective means to enhance employee efficiency and value. "The University of Tulsa’s Continuing Engineering and Science Education offers programs individually designed to meet a company’s requirements."

In April and May, CESE hosted two groups from Schlumberger for advanced technical training through CESE and the TU Department of Petroleum Engineering. The customized TU program, called the Leader School, was requested by Schlumberger to meet its technical needs for those employees with 18 to 24 months experience and has become an integral part of the Schlumberger training program worldwide. The first group, on campus April 14 – May 2, 2008, included students from Algeria, Angola, Canada, Libya, Mexico, Nigeria, Norway, Russia, Saudi Arabia and the United States. This session focused on providing technical training for Schlumberger’s Coiled Tubing Services. The second group was on campus May 5 – 27, 2008, and included students from Algeria, Libya, Mexico, Russia, Venezuela and the United States. This session focused on providing technical training for Schlumberger’s Well Production Services. The following TU faculty members and outside industry experts offered their experience for Schlumberger’s customized program:

Hung Pham (BS ’97)
Production Area Manager, CP Kelco
ELITE Class of 2007

"Polishing an engineer’s communication skills elevates him or her to more than a technical specialist. These skills create a leader. ELITE further develops an engineer from a technical resource to an employee who possesses leadership skills that will take an organization to the upper echelon."

Steve Burgess (BS ’85)
Product Engineering Manager, McElroy Manufacturing, Inc.
ELITE Class of 2007

"I heard so many good things about ELITE that I knew the information attained from the program would increase my value to my company and to my career. I have a renewed focus on the bottom line and how important my team is in achieving our company goals and I focus on the ‘big picture’ of business much more."

JASON LAWRENCE (BS ’00)
Project Engineer, McElroy Manufacturing, Inc.
ELITE Class of 2006

"Before ELITE, I could see my ‘slice of the pie.’ I can now apply what I’ve learned to the financial, managerial, development and marketing aspects of situations I deal with daily at work. Individuals who go through ELITE will have their horizons broadened."

ELITE Builds Leaders

E. Ross Crain, consulting petrophysicist
Richard Erickson, consulting geologist
Norman Hyne, professor emeritus of petroleum geology at TU
Mohan Kelkar, Williams Endowed Chair of petroleum engineering
Gaoming Li, assistant professor of petroleum engineering
Jagan Mahadevan, assistant professor of petroleum engineering
Stefan Miska, professor of petroleum engineering
Mauricio Prado, associate professor of petroleum engineering
Germ Sarica, professor of petroleum engineering
Ovadia Shoham, Floyd M. Steemson Distinguished Presidential Chair in petroleum engineering
Leslie Thompson, associate professor of petroleum engineering
Shubho Wang, petroleum engineering research associate

TU has worked with Schlumberger on these and similar programs since 1993 and looks forward to hosting three more groups in 2008 with more programs scheduled for presentation in 2009 and beyond.

TU’s Continuing Engineering and Science Education (CESE) has offered in-house, customized training solutions to companies around the world since the early 1980s. A short list representing TU CESE client companies includes Anadarko Petroleum Corporation, Chesapeake Energy, ConocoPhillips, Devon Energy, Pertamina, Samson, Schlumberger and the Williams Companies. Additionally, training programs have been held for companies in Canada, Tunisia, Venezuela, Saudi Arabia and Brazil.

For more information about in-company and customized programs, visit www.cese.utulsa.edu, or call (918) 631-3088.
TU Earns High Marks at Alternative Vehicle Competition

A university of Tulsa team earned 13 medals and a fifth-place overall ranking at this year’s Challenge X alternative energy vehicle competition.

The finish line celebration marked the end of Challenge X: Crossover to Sustainable Mobility, a four-year collegiate competition sponsored by the U.S. Department of Energy and General Motors. This year’s event ran from May 12 to May 21 and centered on a 350-mile road rally from New York City to Washington, D.C. The event tested each team on its vehicle’s performance, technical papers and marketing presentations.

“TU’s fifth place finish in this competition is extraordinary given the size of the universities in competition with us,” said TU President Steadman Upham. “All of us at TU are extremely proud of their accomplishments. They have once again brought distinction to The University of Tulsa through their creativity, superior engineering skills and innovations.”

TU received high honors from industry judges in areas such as acceleration, consumer acceptability and petroleum use. The team’s redesign of the 2005 Chevrolet Equinox used a combination of technologies to increase its fuel efficiency to 30 miles per gallon using biodiesel fuel.

To achieve such high efficiency and low emissions, the TU team implemented a design that uses a diesel engine and an electric motor running on a high-voltage rechargeable battery pack with hydrogen fuel cells. A computer screen in the vehicle allows the driver to monitor the car’s hybrid system controls.

The TU vehicle performed especially well in the greenhouse gas emissions and emissions energy use categories, reflecting the team’s work at reducing their SUV’s carbon dioxide emissions by about 42 percent and their nitrogen oxide emissions by about 80 percent from last year’s performance.

The eight-day competition did feature some last-minute drama, which the Challenge X team handled with professionalism and resourcefulness, said Christi Patton Luks, a Challenge X team sponsor and applied associate professor of chemical engineering at TU.

On the first day of the competition, a pre-inspection of the vehicle uncovered multiple leaks in the exhaust system, and it was determined the team would not be able to compete until the problem had been resolved. After an exhaustive series of trial and error — welding, testing, patching and retesting the problem area — the team realized it needed a part it did not have and no other team had on hand.

After some quick research, the team located the part they needed at a nearby plumbing supply store and sealed up all leaks throughout the exhaust system. With eight hours of on-site work and improvisation, the car went from noncompliance to being one of the top teams in the emissions categories.

“It is a thrilling experience to watch these students problem-solving under such intense conditions,” said Patton Luks. “Their ingenuity during this competition has brought national recognition and praise to TU.”

Challenge X is a unique four-year engineering competition that provides the opportunity for select universities across North America to develop advanced technology solutions that will increase energy efficiency and reduce the environmental impact of sport utility vehicles.

TU was one of only 17 universities (and one of only two private universities) invited to compete in the Challenge X program. The TU team has 20 members and three faculty advisors, with 10 undergraduates and two faculty members making the trip to the 2008 competition.

During the competition, the TU team was interviewed by numerous local, national and industry media including the International News Network, ABC News in Washington, D.C., and AutoWeek magazine. The TU team has reached out to various groups, from Girl Scouts to U.S. congressmen, to educate the public about energy-saving research performed by TU students and faculty.

Bringing Inventions to Market: ENS, Business Students Win Cash Prizes at Entrepreneurial Competition

Computer science majors provided the ideas, business students the marketing to win $15,000 in cash to help them further develop their inventions. Two TU teams placed second and third at the 2008 Donald W. Reynolds Governor’s Cup Collegiate Business Plan Competition held in Oklahoma City in April. The competition challenged students to develop ideas for new technological ventures that could potentially lead to economic growth for the state.

“TU has consistently proven it can provide innovative solutions to solve real-world problems,” said Steven Bellowich, dean of the College of Engineering and Natural Sciences. “But it is through entrepreneurship and strategic partnerships that these innovations are commercialized and brought to market. By working together, these students have developed viable plans for very real, useful technology.”

Second place went to RedVault, a type of hardware built to encrypt data imaging devices that was developed and patented by interns at Digital Forensics Professionals. DFP was founded by Gavin Manes, a research assistant professor from the Institute for Information Security at TU.

RedVault team members included undergraduate cyber security student James Johnson and Master of Business Administration students Michelle Witt and Fernando Bermudez. Claire Cornell, assistant director of the International Business and Entrepreneurship Institute, served as faculty co-adviser for the project.

The team received $10,000 and went on to compete against Nevada and Arkansas teams in the inaugural Tri-State Competition held in May in Las Vegas. RedVault is now being marketed by CrypTec Solutions, Inc.

TU’s other team, Cellular Crayons, placed third for their smartphone application allowing sports enthusiasts to order concessions from their seats during a game. Utilizing patented technology from Anyware Mobile Solutions, a company founded by TU alumnus David Payne, the team tested the project at two TU basketball games earlier this year. Participants received their food within three minutes and concession sales increased significantly as a result of the ease in ordering.

Team members from ENS included undergraduate student Nathan Singleton and graduate students Ethan and Timothy Singleton. Faculty co-advisers were John Hale, director of Ssec; and professor of computer science; and Mike Troilo, assistant professor of international business.

Cellular Crayons received $5,000 for their placement.
Working off the grid in a remote area with few supplies, an ambitious (and resourceful) group of eight undergraduate and two graduate ENS students spent their summer 2008 vacation in China building eight engineering projects for rural villagers. This was the second summer that volunteers from the TU student group, Sustainable Energy for North East Asia (SENEA), traveled to Jilin province near the North Korean border to work on a project called the Sustainable Shepherd’s Residence (SSR). Six of the students are also members of the Tulsa Undergraduate Research Challenge (TURC), which funded their transportation costs.

“It’s a chance to use what we know to help others, while continuing to learn in a way that's not available in the classroom,” said Maria Holland, SENEA team leader and junior mechanical engineering major. “It’s an internship, research experience, study abroad and mission trip all in one.”

The SSR serves as a ‘model home’ of sustainable energy systems for the region, and many visitors from high positions in the Jilin province and from North Korea have visited and have scheduled visits to see the residence. The main purpose of the SSR is to show that modern systems can be built with locally available supplies and operated by local citizens,” said Jesse French, SENEA team sponsor and mechanical engineering doctoral student.

Last year, the group had only eight days to assess the area and build a wind turbine from materials they could find in the region. But this year they planned for longer stays, anywhere from three weeks to three months. The extra time allowed them to implement a long list of projects, including two new wind turbines, a biogas generator, a solar oven, Compressed Earth Block (CEB) machine, an aquaponics system and a greenhouse.

“The scope of the project was larger this year, and we enlisted the help of local workers, teaching them how everything worked and how to maintain it when we’re gone,” said Holland.

In preparation for the trip, students practiced building models of their engineering projects in the McElroy Prototyping Lab in Keplinger Hall. But as they quickly learned, flexibility and resourcefulness became their most valued engineering skills.

No book can teach you how to function in a real world situation like we had to do while in China,” said Blake Hylton. “You can’t sit in a classroom and learn how to go down to a scrap yard, look at a pile of twisted pipes and rusty sheet metal, and visualize how to make it into something functional. That only comes from having been there and doing it yourself.”

Student volunteers plan to return to the shepherd’s residence next summer where they will be continuing their existing projects and beginning new projects.

For more information on supporting ENS students in their engineering volunteer work, contact Miranda Pugh, director of development, at (918) 631-3287, or miranda-pugh@utulsa.edu.
Students Win Best Design Proposal, Get 337 mpg at Supermileage 2008

University of Tulsa mechanical engineering students achieved outstanding results during their first-ever entry into the Supermileage competition, an annual international program sponsored by the Society of Automotive Engineers. TU students earned first-place honors for their design proposal, and their vehicle succeeded in getting 337 miles per gallon (mpg) fuel economy.

"To achieve a first-place finish in any event at a car competition in the first year to compete is extremely rare and especially commendable," said John Henshaw, professor of mechanical engineering and faculty sponsor of TU’s Supermileage team. “Now we’re extremely motivated to go back next year and do even better.”

Supermileage 2008 was held June 5-6 in Marshall, Michigan, with 30 teams coming from universities around the world, including Canada, Mexico, India, Italy, Qatar and the United Arab Emirates. The competition challenges students to craft a single-person vehicle with one goal in mind — fuel economy — to raise public awareness of technological advances in energy efficiency. Each vehicle used the same 3.5 horsepower Briggs and Stratton lawn mower engine and had to travel six times around the proving ground track at an average speed of at least 15 miles per hour.

The TU team won first place in the Best Design Proposal event, which combines a written report submitted in advance of the competition with an oral presentation given at the competition. The team’s greenness at the competition actually worked to their advantage in winning the Best Design Proposal.

“Unlike many of the other teams who had inherited a car, we were very capable of explaining everything about our car since we had built it from the ground up,” said team leader Jesse Doyle, who graduated from TU in May in mechanical engineering. “The judges were also very impressed that we weren’t trying to do too much at one time. We had worried that our car was almost too simple. We realize now that the reason that our car did so well in the end was because of its simplicity.”

TU finished 10th place overall — the best finish of any first-time entry. The TU vehicle achieved 337 mpg in the fuel economy event, which is the central component in the competition. First place went to the University of Laval in Canada, which set a new record of more than 3,000 mpg.

The TU team’s design consisted of an aluminum honeycomb base, donated by Nordam Group, Inc., reinforced with aluminum C-channel and a steel rear roll cage. The three-wheeled vehicle was powered by a 3.5 horsepower gasoline lawn mower motor and a transmission system of clutches and roller chains from the engine to a multi-speed hub used to power the back tire.

The team’s design parameters were weight, cost and efficiency. "We learned a great variety of things, especially how to go out and do our own research on a concept without a textbook to follow," said team member Josh Emerson, a senior mechanical engineering major from Owasso, Oklahoma. "The project took us through the whole process of approving a design with the team, 3D modeling of the design and then creating an actual physical part."

Steve Tipton, professor of mechanical engineering and faculty sponsor of TU’s Supermileage team, said the team has plenty of ideas ready for next year’s Supermileage event. Updates will include a wind resistant fairing and modification of the engine to include a custom-built fuel injection system, which was not quite ready for this year’s competition.

"The team was tenacious. They battled numerous small problems, like bolts and tubing vibrating loose, but their car completed over 35 miles during the day of the competition," Tipton said. He also said their quick thinking led to another gas-saving technique.

In the middle of the competition, the students modified their car so they could run in a “pulse and glide” mode, accelerating to a high speed, then killing the engine and coasting to save fuel. They made their last two of five total runs in this mode, and improved their mileage performance with every run.

Student Earns Goldwater Scholarship;
Two Students Win Honorable Mentions

University of Tulsa student Maria Holland, a junior mechanical engineering major from Minnesota, has been named a 2008 Goldwater Scholar. The Goldwater Scholarship is the premier award for recognizing students pursuing careers in science, mathematics and engineering.

After finishing her undergraduate degree, Holland plans to earn a doctoral degree in sustainable energy engineering. In her professional career, she wants to conduct research in low-technology renewable energy, teach at the university level and write textbooks.

Two other TU students received honorable mention in the Goldwater Scholar competition: Nathan Brooks, a senior computer science and electrical engineering major from Eula, Texas; and Erin Strandford, a junior physics and applied mathematics major from Albuquerque, New Mexico.

Holland, a 2006 graduate from Coon Rapids Senior High School, is president of TU’s chapter of Engineers Without Borders (EWB) and led a group of TU students this summer on a chapter of Engineers Without Borders (EWB) and led a group of TU students this summer on a project based in northeastern China that teaches sustainable building techniques.

Two other TU students received honorable mention in the Goldwater Scholar competition: Nathan Brooks, a senior computer science and electrical engineering major from Eula, Texas; and Erin Strandford, a junior physics and applied mathematics major from Albuquerque, New Mexico.

Holland, a 2006 graduate from Coon Rapids Senior High School, is president of TU’s chapter of Engineers Without Borders (EWB) and led a group of TU students this summer on a project based in northeastern China that teaches sustainable building techniques.

"The intimate connection with a community in another part of the world has given me a different perspective on domestic and international issues that I could not have gotten any other way," Holland said in an interview about her trip.

TU has had 42 students receive Goldwater Scholarships since 1995. The one- and two-year scholarships cover the cost of tuition, fees, books, and room and board up to a maximum of $7,500 per year, with sophomores receiving two-year scholarships.
Students Present at Tulsa Geological Society

ENS graduate students Kieran Barrows (BS ’07) and Erin Lewallen (BS ’06, MS ’08) had a unique opportunity last April to present at the Tulsa Geological Society (TGS) at the Petroleum Club in downtown Tulsa. Visiting professor James Derby asked the students to speak at the meeting when the scheduled speaker had to cancel.

“It was an exciting opportunity, and I was a little nervous,” said Barrows, a Tulsa native who began her master’s in chemical engineering last spring after finishing her bachelor’s degree in December. “But I had a lot of compliments and made some new contacts. It was a great experience.”

Barrows presented information on subsea hydrates, while Lewallen presented information on the shallow seismic of the Simpson Group in southern Oklahoma.

Lewallen returned to the TGS in May for recognition as the geosciences outstanding student of the year. She now works for Chevron in Houston, Texas. Barrows continues her studies in the college and expects to graduate in May 2009.

Biology Lab Inspires Art Student — Sketch Published on Journal Cover

Inspiration can come in many forms, and for Aleanna Gencarelli, a junior fine arts major, her muse came to her during her spring 2008 anatomy and physiology lab.

Karen McMahon, instructor of biological science, submitted Gencarelli’s piece to the Human Anatomy & Physiology Society (HAPS), an organization dedicated to the teaching of anatomy and physiology at the college level, for consideration for publication. Gencarelli’s drawing was chosen for the cover of the summer HAPS-EDucator publication.

Brumback Earns Award for Excellence in Chemistry

Kari Brumback (BS ’06, BA ’06) received the Iota Sigma Pi Undergraduate Award for Excellence in Chemistry, a national award given to one senior woman chemistry student each year.

“Kari won this award not only because she is an exceptional student and a great researcher, but also because she is an exceptional person,” said instructor Rita Rhodes, who serves as the Iota Sigma Pi advisor at TU. “She is a great leader, very well organized and volunteers her spare time to help others.”

Spare time was scarce for Brumback, who earned bachelor’s degrees in both chemistry and English. She also served as the president of TU’s Iota Sigma Pi chapter, conducted laboratory research and volunteered to monitor urban-impacted creeks. Despite the heavy load, she earned an overall GPA of 3.97/4.0.

“I enjoy using both sides of my brain,” said Brumback, a native of Willow Park, Texas. “The symbolism and creativity are refreshing, and I had a chance to be friends with two totally different groups of people.”

This fall, Brumback began Yale University’s doctoral program in chemistry. After earning her Ph.D. degree, she plans to pursue a tenure-track university faculty position.

She believes her experiences at TU will help her be an excellent teacher of chemistry as well as a researcher.

“I want to find a university where the resources and emphasis on excellence in teaching are equal to that of research,” Brumback said. “That’s what I loved about being at TU. I want to spend my career someplace that has the same philosophy.”

Student Earns International Recognition

For the second year in a row, an ENS undergraduate student snagged the top honor for research at the ISA International Instrumentation Symposium, held this year in Pensacola, Florida.

Samuel Kucera, a senior engineering physics major from San Diego, received the award for best undergraduate paper for his work on “Instrumentation of an Inertial Kinetic Exercise Device with a Single Axis Accelerometer.” Adam Looper (BS ’07) received the same award from ISA last year.

To complete this unusual interdisciplinary research project, Kucera worked under the direction of two TU professors: Parameswar Harikumar, assistant professor of physics, and John Caruso, associate professor of exercise sciences.

“Our students are recognized not only because of the originality and quality of their research, but also their ability to present the results clearly and professionally,” said Roger Blais, provost and vice president for academic affairs, who received the Neal P. Barr Award at that conference.

“They live up to the core value of excellence in the TU mission.”

O’Brien Recognized for Wildlife Research

Valerie O’Brien, biological sciences doctoral student, was recently awarded the Wildlife Disease Association’s Student Research Recognition Award for her outstanding research on the effects of Buggy Creek virus on cliff swallows and house sparrows.

The international award is given each year to the student judged to have the best research project in the field, based on written communication and scientific achievement. As part of the recognition, O’Brien, a Tulsa native, was the featured student speaker at the Association’s international conference in Alberta, Canada, last August.

“I’m honored to have an opportunity to present my research to other scientists in this field,” O’Brien said.

O’Brien’s research is done at cliff swallow colonies in southwest Nebraska along the North and South Platte Rivers. Buggy Creek virus is found throughout the Great Plains and is common in the Nebraska population. While it does not adversely affect the swallows, it does kill house sparrow nestlings, which have been present since the sparrows’ introduction to America from Europe in the 1850s.

“My research shows one way in which a virus can get beyond a naturally evolved system and become a problem,” O’Brien said. “This may happen in many situations and populations, both animal and human.”

O’Brien’s adviser is Charles Brown, professor of biological sciences. They collaborate with researchers at the Centers for Disease Control, the National Wildlife Health Center and the University of California at Davis.

“Valerie’s research will likely have a major impact on the field of arbovirology by showing that nestling birds—not adults—are the primary hosts for virus,” Brown said. “This could change how people survey for viruses in general and is an example of the high-quality work being done by TU scientists.”

Biology Student Wins Tri-Beta Convention Research Award

Eight representatives of TU’s Pi Alpha Chapter of Tri-Beta, the national biological honor society, attended the Tri-Beta South Central Regional Convention held April 4-6, 2008, at the University of Oklahoma Biological Station at Lake Texoma, Oklahoma.

Kristen Saksa, (BS ’08), won first place for her PowerPoint presentation, “Phylogeny, Systematics and Diversity of Haematococcus,” and a voucher to present her research at the Tri-Beta National Convention.

Saksa’s research looks at the transmission of a green alga (Haematococcus), which is commonly found in bird baths, as a model of algal dispersal mechanisms.

Two other biology students represented TU well with their research presentations. Lori Hastings presented “Diatom Analysis Regarding the Eutrophication of Lake Texoma (OK)” and David Gerstenkorn spoke about “Aberrant Splicing of ST6 Gal I in WEHI-231 Cell Line.”

The Tri-Beta South Central Regional Convention brings together chapters from colleges and universities in Oklahoma, Arkansas, Louisiana and Texas. This year’s convention brought together 120 representatives from 13 universities. Undergraduates presented the results of their research as either poster or PowerPoint presentations and competed for the John C. Johnson Award (best poster) or the Frank G. Brooks Award (best PowerPoint).

Saksa’s Frank G. Brooks Award came with an honorarium and a $750 voucher to attend and present again at the biennial national convention. She represented TU among the 57 chapters and 250 attendees at the Tri-Beta Biennial National Convention at Northern Kentucky University in Highland Heights, Kentucky, May 20 through June 1, 2008.
Hulings Memorial Lecture to Feature Evolutionary Biologist

The Norman M. Hulings Memorial Lecture, hosted by the College of Engineering and Natural Sciences, will feature evolutionary biologist Neil Shubin as its speaker, at 7:00 p.m., November 7 in the Great Hall in the Allen Chapman Activity Center on the TU campus. In addition to recognizing the 80th anniversary of the College of Engineering and Natural Sciences, the lecture is being held in conjunction with the bicentennial celebration of Charles Darwin’s birth—the “Darwin Year.”

Shubin has scoured the globe researching the evolutionary origin of anatomical features of animals, and has found new fossils that change the way we think about many of the key transitions in evolution. These discoveries have emerged from his expeditions to Greenland, the High Arctic of Canada, Argentina, China, Morocco, Nova Scotia and the deserts of the United States. In 2006, he announced in the journal *Nature* the startling discovery of the fossil remains of *Tiktaalik roseae*, a newly discovered species that has been called a “missing link” between fish and land animals.

In Shubin’s book, *Your Inner Fish: A Journey Through the 3.5-Billion-Year History of the Human Body*, he traces the evolutionary transition between life in water and life on land in order to answer the question, “Why do we look the way we do?” The answers to this question come from seemingly strange places: from the bodies, fossils and DNA of everything from microbes to worms and fish. Together with DNA, new fossils are giving scientists surprising insights into the human body. Following the lecture, Shubin will be signing copies of his book, which is available at local bookstores.

Shubin’s work has enjoyed growing exposure in popular culture. He has been named an ABC Person of the Week and appeared as a good-humored guest on the Colbert Report.

“His lecture promises to be informative and engaging,” said Mark Buchheim, TU associate professor of biological science. “The biology and geosciences departments at TU are planning additional Darwin Year events for the spring, and Shubin’s presentation will be a great way to kick off the celebration.”

Shubin is provost of academic affairs at the Field Museum and also a paleontologist and the associate dean of organismal and evolutionary biology, and the Robert R. Bentley Professor at the University of Chicago. Author of numerous scientific papers, he has received a variety fellowships and awards including a Miller Research Fellowship, Guggenheim Fellowship, The Berlin Prize and ABC News Person of the Week.

The Norman M. Hulings Memorial Lecture was named to honor the late TU alumnus and longtime executive with ONEOK and Oklahoma Natural Gas Co. For more information, contact Amethyst Cavallaro, University Relations communications specialist, at (918) 631-2656.

New IBCB Blends Disciplines and Institutions

The new Institute of Bioinformatics and Computational Biology (IBCB), housed in ENS was formed to explore the marriage of medical science to computer technology, using computer systems to model and analyze processes in cellular biology. Biocomputing is a technological tool still in its infancy, but the research done at ENS will help set the standard for an emerging scientific trend.

With an interdisciplinary and multi-institutional focus, the IBCB is led by John Hale, associate professor of computer science; Kenton Miller, associate professor of biological science; and Bill Coberly, associate professor of mathematical sciences.

“In 2006, we put together an esoteric proposal to develop computer systems to model and analyze processes in cellular biology,” said Hale. “We knew we wanted to model the behavior of cells—how they look, how they communicate, etc.—and that requires biologists, mathematicians and computer experts working together.”

Serendipity and perfect timing helped jumpstart the IBCB. ENS Dean Steven Bellovich happened to visit the director of research at the Warren Foundation and learned that the foundation was working with the University of Oklahoma Health Sciences Center on a research project. The project needed a partner to manage and process the huge amount of data. The IBCB fit the bill.

Linking multiple institutions and disciplines creates a unique synergy destined to create new knowledge. ENS students at all levels are able to be part of this process.

“Right now we have about 20 students doing research on the project: undergraduates through doctoral level,” Hale said. “In the next several years, we intend to add faculty and students to the project—perhaps we’ll offer degree programs in this specific area one day.”

In addition to the partnership with OUHSC and the Warren Foundation, the ICBC will continue to work on other research projects and priorities. Hale said their goal is to have 10 faculty and 30 students working in the institute soon.

Chemistry Department Hosts Nanotechnology Art Expert at Gilcrease Museum

At first glance, Tulsa’s Gilcrease Museum, nanotechnology research at The University of Tulsa and frescoes by 15th-century Tuscan masters don’t have much in common. But thanks to some creative thinking by TU chemistry students, these topics came together in an April 9 public lecture by University of Florence Chemistry Professor Piero Baglioni.

The TU student chapters of the American Chemical Society and Phi Lambda Upsilon, a chemistry honor society, hosted Baglioni, whose work has brought new life to national art treasures all over the world. His lecture, “Nanotechnology for the Conservation of Cultural Heritage,” took place at the Gilcrease Museum, which is now managed by TU. The event provided an exciting example of the new areas where the University and Gilcrease Museum complement each other in their research, community outreach and teaching.

“With TU’s emerging partnership with Gilcrease, our students really wanted to find a speaker who could connect our department and the museum,” said Dale Teeters, professor and chair of the Department of Chemistry and Biochemistry and director of the Institute of Nanotechnology at TU. “Dr. Baglioni’s work exemplifies how advances in nanotechnology can serve a broad range of applications, even in the art world.”

Nanotechnology is the study of matter on the molecular or nano level. By developing products on the nanoscale, Baglioni’s team at the Center for Colloid and Surface Science (CSGI) in Florence has discovered a way to remove only the hazardous substances that are destroying an art piece while leaving the rest intact.

The CSGI team invented a special gel that acts like a sponge, soaking up a cleaning solution and transferring it to the surface of an artwork to remove harmful chemicals. The gel is especially adept at this type of cleaning because it stays on the surface, rather than soaking into a material. The gel and cleaning solution is then reabsorbed by a magnet, leaving no damaging residues.

This technological breakthrough has led to the amazing restoration of some priceless artifacts, including Italian frescoes, Swedish shipwrecks, Mayan sculptures and even organ pipes.

For more information, contact Amethyst Cavallaro, University Relations communications specialist, at (918) 631-2656.
The Secret Life of Professors

Most young children around second or third grade are stunned to discover that their teachers are actual human beings with lives and functions outside the classroom.

By college, most students have come to accept this fact — but it can still be stunning to discover a professor has an avocation completely outside the realm of his or her expertise. A mathematics professor singing in a symphonic chorus or a mechanical engineering professor on the sports field seems uncanny.

Upon reflection, though, it actually seems appropriate for an engineer with expertise in traffic crash reconstruction to be drawn to the rugby field. It also makes sense for a mathematics professor to find joy in the perfect logic of musical tones and chords.

Math and music in perfect harmony

Bill Coberly, associate professor of mathematics majored in mathematics in college but played the trumpet throughout his high school and college career. In the early 1990s, after many years without a musical outlet, he picked up the trumpet again.

“It was miserable,” Coberly said. “So, even though I don’t have a good solo voice, I can read music and have a good ear, so I joined my church choir.”

Coberly’s vocal pursuits have continued to stretch. He currently sings in a small ensemble called Counterpoint. The ensemble performs a variety of music from madrigals to contemporary works and performs for a number of community events.

In addition to relieving the stress of his academic profession, Coberly suggests that his mathematical and musical lives may be intertwined at a deeper level. “I did listen to and play Mozart when I was young,” said Coberly. “So maybe there is something to the myth that music and mathematics are related.”

Life lessons on the field

Far from the concert hall, another professor’s interests are found on the rugby field. Jeremy Daily, assistant professor of mechanical engineering, has enjoyed rugby — or “rugby football” as it is officially known — since his own college days. Today, he helps coach the TU Rugby Football Club.

“Playing [NCAA] college football wasn’t going to work for me,” Daily recalled, “but I could find the same camaraderie, the same spirit of competition and the same physical outlet in rugby.”

Armed with a Ph.D. degree and a college rugby career, Daily joined the ENS faculty in 2007 and was glad to learn a rugby club had recently been formed by students.

“A lot of the players are ENS students,” Daily said. “When they found out I played, they wanted me to join them on the field. I’d broken too many bones in the past to start playing again, so I agreed to help out by coaching and acting as faculty advisor.”

Daily said he quickly gained the nickname Sergeant: a reference to his military career as well as the tough drills he put the club through when doing physical conditioning. But the hard work has begun to pay off.

The Rugby Club, with 22 members, enjoyed its first winning season last year, traveling to games at other colleges and universities in the region. But winning is only one goal: other goals include growing the team to about 30 members and ensuring that a core group of students continue to keep the club self-sustaining.

“We like to win and we want to do more of that,” Daily said, “but we get just as much out of simply being a team. Learning to rely on each other, lead each other and be accountable for everyone’s success is an important part of life. They learn that on the rugby field.”

Daily said that rugby is more than just a hobby. He truly considers it an outreach function of his job. The interaction with students and potential students helps strengthen his role as a faculty member.

“Engineers tend to be introverted, so this is a good outlet for me and the ENS students in the club,” Daily said. “I can foster relationships and be a role model for these young men who are away from their families.”

Daily touts the support of the TU administration for some of the Rugby Club’s success.

“The administration supports the Club tremendously,” Daily said. “It provides a fantastic field for practice and games. They even paint the field for us before matches, which is a huge job.”

On a personal level, Daily enjoys the opportunity for exercise and fun.

“By the end of summer, I’m getting pretty fat and look forward to practice starting again,” he laughed.

TU’s ‘Sense-Sational’ Program Engages All Five Senses

The University of Tulsa and local nonprofit organizations coordinated for a “sense-sational” science and math summer school for Tulsa area fourth- and fifth-grade teachers.

The three-week Sense-Sational Science program explored science and math using the five senses: sight, sound, smell, taste and touch. To complement this sensory method of teacher training, TU partnered with area nonprofits to offer science experiences in the senses at the Oxley Nature Center, Gilcrease Museum, Tulsa Zoo, Oklahoma Aquarium, and Tulsa Air and Space Museum & Planetarium.

“The program is about giving teachers creative ways of presenting science and combining different areas to complement each other,” said Rob Howard, professor of chemistry at TU and director of the Sense-Sational Science program. “And, of course, it’s about having fun while you’re learning.”

The program emphasized cross-disciplinary learning by showing the interdependent relationships that math and science have with the fine arts, social sciences and reading. For example, the teachers practiced teaching geometry by creating sand paintings and studying their patterns. At Gilcrease Museum, they took a behind-the-scenes tour to see the scientific side of history in the anthropology storage area. And at the zoo, teachers learned about the biology of elephants’ big ears and the physics of the sounds they make at frequencies humans can’t hear.

“The program gets teachers away from the textbooks and into the field to experience the science,” said Ava Howard, elementary science curriculum specialist for Tulsa Public Schools. “It also creates partnerships between teachers and Tulsa’s science resources that open up opportunities for those organizations to visit the classrooms and for teachers to coordinate field trips.”
Prestigious Collaboration Nets Nature Article

G
essciences Professor Peter Michael has coauthored an
article appearing in the May 2008 edition of Nature, the world’s premier scientific journal.

Michael was one of six authors of “Origin of a Southern Hemisphere” geochemical signature in the Arctic upper
mantle.” He joined researchers at Harvard University, Columbia University and Oregon State University to write
the article based on a project conceived at a meeting in Paris 17
years ago.

“In 1991, we defined a goal of exploring all of the earth’s
mid-ocean ridges,” Michael said. “A small number of us
focused particularly on the Arctic mid-ocean ridge. The goal
was so challenging that it required an international collabo-
ration.”

By 2000, the group had garnered the support of the
National Science Foundation, and by 2001, Michael was
engaged in international oceanic research.

“Two undergraduate ENS students were with me on a
67-day voyage from Norway in the summer of 2001,” Michael
said. “We conducted research from a Polar icebreaker on a
newly explored part of the earth on the Gakkel ridge.”

Michael has authored two other articles for Nature based on
this research, both in 2003.

Today, Michael continues to analyze the Gakkel ridge rock
samples in laboratories at TU. He is attempting to understand why the mantle source of the volcanic rocks is richer
in H2O than other mid-ocean ridges. He is conducting additional research to measure volatile species in magmas.

“Being published in Nature isn’t only a reflection on the quality of my research,” Michael said. “It reflects strongly
that science of the highest caliber is pursued at TU.”

Physics Journal Club Celebrates 11 Years

A
fter leading Bible-study groups for years, Assistant Physics Professor Jerry McCoy understood the benefits of

Physics Journal Club, brainchild of McCoy, has grown from small group meetings in professors’ homes in
1997 to large-scale events that not only attract ENS students and faculty, but also high school students, physicists and
members of the general public. The common bond is a love of physics and a hunger to learn and share with others.

The club was initially designed to foster camaraderie among freshman physics students. Part of a required class, it
allowed a nonformal environment where young students could talk about physics and get to know their classmates and
professors on a more personal level.

“When we started, we regularly had about 10 people at each meeting,” McCoy said. “Today meetings average more
than 100 people. At our final meeting — our physics ‘show’ — we had nearly 300 people crowding into the presenta-
tion hall.”

The club meets once a month in the Faculty Study, President’s Lounge or other location on the TU campus. McCoy
avoids classrooms or auditoriums to encourage a more casual atmosphere. Two weeks before each meeting, articles from
current journals are designated for discussion. At the meetings, pizza is served and the participants review the articles,
watch a demonstration of the principles examined and join a lively discussion.

Although McCoy acts as facilitator of the meeting, he relies on ENS students to review and summarize the articles.
The review is intended to refresh the audience’s recollection of the paper, but it is also a chance for students to gain
experience in public speaking.

“This is a safe environment for students to practice presenting to others about their field,” McCoy said. “The older
members of the group enjoy watching the students speak, and the high school students are more apt to see themselves studying physics in
college when they see someone close to their age
giving a review.”

The greatest problem facing the Club has been a decline in student participation toward
the end of the school year. McCoy solved the
problem by changing the format of the last
meeting to a one-hour ‘show’ of physics demon-
strations. This last meeting has become the most
popular and draws hundreds of spectators.

“My teenage daughter calls it ‘the Gathering
of the Geeks,’” McCoy said. “Really, we are just
a bunch of people who want to eat pizza and
talk about black holes. We may be geeks — but
we’re popular.”

Jerry McCoy shows local high school students how basic experiments
reveal overarching laws of physics.

Professors Publish 5th Edition of Text

Biological Sciences Professor Estelle Levetin and
instructor Karen McMahon recently completed the fifth
edition of their text Plants and Society (New York: McGraw
Hill, 2007). With recent global changes in how plants
are used for energy, food, and building products, the new
edition includes several big changes.

“When we wrote the first edition in 1996, for
example, biofuels weren’t even mentioned,” said Levetin,
also the chair of the biological sciences department.

“But, of course, this is a big issue so we added material
on that.”

Levetin said the text is used by 120 university depart-
ments nationwide for biology and botany courses. At TU,
the text is used for the Plants and Society course from
which the book derived its title.

When Levetin began teaching that course in the
1970s, there were no texts covering these applied aspects
of botany. She simply patched together reading materials
from various journals. When McMahon joined the
faculty in the 1980s, they decided to team up and write a
textbook to fill that gap.

“Even today there are no other books covering this
discipline,” Levetin said. “As topics like medicinal uses
of plants and genetically engineered crops emerge, the
importance of the discipline will continue to grow.”

Levetin said it takes approximately three years to create
each new edition, and she expects to begin working on
the sixth edition soon.

“There are a number of ethical issues associated with
biofuels as new developments and inventions emerge,”
Levetin said. “We keep up with the literature on these
topics that impact society.”

Levetin said that, despite the addition of many topical
issues to the book, the first third of the text remains
a background in botany. This background provides
students with the framework to scientifically support
the rest of the information.
after his naturalization ceremony on August 13.

Parimala Mohan, Dipika Mohan, Preeti Mohan with Ram Mohan

Professor Mohan

Becomes U.S. Citizen

Almost 10 years after he started the process, Ram Mohan, professor of mechanical engineering, achieved a special milestone this summer — he became a U.S. citizen. At the Aug. 13 ceremony in Tulsa, his family and TU faculty and staff proudly supported him as U.S. Chief District Judge Claire V. Eagan gave him his naturalization certificate.

“This citizenship is important to me because I can vote in the upcoming 2008 presidential election, conveniently travel with a U.S. passport, and I can seek research funding from federal agencies such as the Department of Defense and NASA,” Mohan said.

Mohan first came to the United States from India in 1990 and earned his master’s and doctorate in mechanical engineering from the University of Kentucky in Lexington, Kentucky. Prior to coming to the United States, Mohan received a bachelor’s degree in mechanical engineering from the University of Kerala in Kerala, India, and worked for six years in the Indian Telephone Industries in Bangalore, India.

He joined TU as an assistant professor of mechanical engineering in January 1996 and received his permanent residency (green card) in 1998. In 2001, he was promoted to associate professor with tenure, and this August, he was named a professor of mechanical engineering.

Nationwide, 30 young professors received this award, which includes a $5,000 research grant to be matched by the member institution. More than 100 young faculty were nominated for the prestigious award from the ORAU, a collaboration of 119 universities across the nation with the common goals of advancing science and education by partnering with national laboratories, government agencies and private industry.

“I believe the quality of my previous research in the field of silicon carbide (SiC) electronic materials is one reason I was selected,” said Wang, who joined the ENS faculty in 2006. “My collaborators and I performed pioneering theoretical investigations of possible interface defects in SiC electronic materials.”

However, Wang indicates that it’s the impact of his future research that may have had a greater impact on the decision to award him the honor.

“SiC promises to be a promising novel electronic material and is expected to replace silicon in several important applications,” Wang said. “The research will eventually lead to improvements in the efficiency of energy production, distribution, storage and conversion.”

Wang used the funds for summer research and travel expenses for research meetings and development collaborations with other ORAU partners.

Wang is the first TU faculty member to receive the Powe Award since its inception in 1990.

Wang Receives Junior Faculty Award

Sanwu Wang, assistant professor of physics and engineering physics, was recently awarded the Ralph E. Powe Junior Faculty Award by the Oak Ridge Associated Universities. The award represents Wang’s public recognition by his academic peers of the quality and promise of his research.

In 1966, the Beach Boys released a worldwide hit with the song “Good Vibrations.” While writing the classic song, Brian Wilson probably did not realize he was describing a real scientific phenomenon.

But biological science associate professor and alumna Peggy Hill (BS Natural Science ’77) understands what the song is really about. In the past two decades, she has become one of the foremost scholars in the emerging field of vibrational communications.

Her new book, Vibrational Communication in Animals, is touted by the publisher and critics as the foundational text in the field.

“There is really no other book written about vibrational communication across all animal taxa,” Hill said. “No one else has pulled together reports from all animals into one source, then connected the common mechanisms and sorted out the terminology.”

Hill said she became interested in vibrational communication when she began studying the prairie mole cricket in 1991 for her doctoral research. A discovery dawned on her when recorded cricket songs playing through the air were not getting the response she planned. She realized the crickets responded to the vibrations they felt, not the sounds humans hear.

“I ended up organizing a symposium in 2001 for everyone in the U.S. actively working on vibrational communication,” Hill said. “We published papers of that meeting, which was really the beginning of the book.”

Hill said the book will likely be used as a text and reference for the rapidly expanding field of vibrational communication. But, she also hopes it will be used by a broader audience, even nonscientists simply interested in animal communication.

So, do humans really have the ability to “keep those lovin’ good vibrations happening”? Hill thinks so.

“Humans have the same specialized nerve endings as other mammals, so we do have the sensory equipment,” Hill said. “This could explain some of our ‘odd’ responses to situations when we get the ‘heebie jeebies.’ We are perhaps sensing some sort of alerting vibrations but have been trained from childhood to not consciously recognize them.”

Hill said much more research needs to be done on human vibrational senses, and she hopes that others will use her book as a building block to expand the body of knowledge.

Mechanical Engineering Professor Honored for Teaching and Research

Steven Tipton, the Frank W. Murphy Distinguished Professor of mechanical engineering, has received a Fellow Award from the American Society for Metals (ASM) International, a materials information society, for his outstanding accomplishments in teaching and research.

Tipton will be presented the award at ASM’s Awards Banquet during its annual Materials Science & Technology conference in October 2008 in Pittsburgh. In selecting Tipton as an ASM Fellow, the organization cited his influence in research breakthroughs, nurturing of a new generation of scientists and engineers, and his contributions to advancements that have improved quality of life.

In addition to the ASM Fellow Award, Tipton is the holder of eight U.S. patents and has received numerous professional and teaching accolades including the Outstanding Engineering Educator Award from the Oklahoma Society of Professional Engineers, Ralph Teters Engineering Educator Award from the Society of Automotive Engineers and the Mortar Board Teacher of the Year award.

Tipton has been on TU’s faculty since 1984 and has acted as faculty advisor for a wide variety of award-winning student projects such as TU’s Supernatural team, which recently won the high-efficiency vehicle event’s Best Design Proposal award; a student group that designed an automatic can-crushing machine for disabled workers that earned the Oklahoma Society of Professional Engineers’ Outstanding Engineering Achievement Award; and a student-faculty based partnership with Zebco, a fishing reel manufacturer, that has yielded two student-led technology patents.

Faculty Book Shakes Up Communication Theories

Hill’s recent book, Vibrational Communication in Animals, is the first book written about the phenomenon of animals communicating through vibrations.

Hill began her research into the phenomenon in 1991. In her book, she explores the topic and explains how animals communicate through vibrations. The book is aimed at both scientists and the general public.

Hill’s research has been published in numerous scientific papers, and her book is widely recognized as the leading reference on the topic. It is available in bookstores and online.

Hill’s research and book have been widely covered in the media, and she has been interviewed by numerous news outlets. She has also given lectures on the topic at universities and conferences around the world.

Hill’s work has earned her numerous awards and recognition, including the American Chemical Society Award for Outstanding Contributions to Chemistry and the American Institute of Chemical Engineers Award for Outstanding Paper in Chemical Engineering.

Hill’s book, Vibrational Communication in Animals, is a comprehensive exploration of animal communication through vibrations. It is a must-read for anyone interested in the fascinating world of animal communication.
1982
Robert Rorschach (MS ’47) and Susan Sample Rorschach (BA ’48) have retired and are living at Inverness Village in Tulsa.

1950
Arnold Brown (BSPE ’50) and his wife, Pat (BS ’50), celebrated their 60th wedding anniversary this summer by going on a seven-day Alaskan cruise with more than 30 members of their family to celebrate the occasion.

B.D. “Duffy” Deardorff (BS ’58) and Shala Deardorff (BSBA ’57) were happily married for 50 years in May 2007. Duffy is semi-retired. The Deardorffs feel blessed to have their grandchildren living near them in Colorado.

1970
Stan Ruth (BS ’70) has joined BASF in Port Arthur, Texas, as technology manager, process control. This transition occurred after numerous roles in process automation, process design and production operations engineering in the petroleum refining, polymers and petrochemicals industries.

1980
Christopher L. Liner (MS ’80) has joined the University of Houston as a professor of geophysics and director of the reservoir quantification lab. He was previously with Saudi Aramco’s EXPEC advanced research center in Dharan, Saudi Arabia. Liner is the former editor of the journal Geophysics and author of the textbook Elements of 3D Seismology. He was a member of TU’s geosciences faculty from 1990 to 2004.

John Harvey, III (BS chemistry ’85) of INEOS in the Worth area. Harvey graduated with a doctorate from Vanderbilt University in May 2007. Tracy was awarded a medical degree, while Matthew received an educational doctorate. They currently reside in Denver.

Todd Wegner (BSME ’80) and Courtney Nelson Wegner (BSBA ’81) were married at LightCatcher Winery in Fort Worth, Texas. Todd is a contract engineer at Lockheed Martin and actively races Spec Miata race cars. Courtney completed her MBA at Texas Christian University and is the marketing director of an online retail company. The couple reside in the Dallas/Fort Worth area.

1990
Paige (Nichols) Eichelman (BSPE ’92) and Mark “Ike” Eichelman (JD ’90) met in early 1993 (during which time Paige was a doctoral student in the petroleum engineering department) and were married in October 1994. Paige began work as a professional engineer in 1993. Paige worked as an engineer for four years until switching careers to become a secondary school teacher, in order to have a more portable career as the wife of a military officer. She taught secondary mathematics, science and technical drawing for seven years in the United States and Germany. Currently, Paige is nearing the end of a master’s of biodiversity conservation and management through the University of London. She expects to sit for her last two exams for this program in the fall of 2009. Ike and Paige have a very nomadic life, which they love and take full advantage of—traveling to over 30 different countries so far—and still counting.

Winston Gregory (BS ’97) accepted a position as a junior system administrator with Lockheed Martin Corporation’s Enterprise Information Systems division. He also serves on the board of trustees at TU’s Wesley Foundation.

2000
Matthew Pepper (BS ’00) and Tracy Arnold Pepper (BS ’02) both received their graduate degrees on the same day from Vanderbilt University in May 2007. Tracy was awarded a medical degree, while Matthew received an educational doctorate. They currently reside in Denver.

Todd Wegner (BSME ’00) and Courtney Nelson Wegner (BSBA ’01) married at LightCatcher Winery in Fort Worth, Texas. Todd is a contract engineer at Lockheed Martin and actively races Spec Miata race cars. Courtney completed her MBA at Texas Christian University and is the marketing director of an online retail company. The couple reside in the Dallas/Fort Worth area.

The TU Alumni Association will be honoring ENS graduates Chip McElroy (BS ’85) and Duane Wilson (BS ’82) as 2008 distinguished alumni during Homecoming festivities this year.

www.utulsa.edu/alumni/homecoming