



Engineering Our Future

Summer 2014

Texas Tech University - Edward E. Whitacre Jr. College of Engineering



Terry Fuller Petroleum Engineering Research Building

The Bob L. Herd Department of Petroleum Engineering is now home to a new \$22.8 million research facility funded entirely by industry and private contributions. The Terry Fuller Petroleum Engineering Research Building is named in recognition of lead benefactors and Texas Tech University graduates, Terry and Linda Fuller of Frisco, Texas.

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Community
of
Scholars



Dean's Report

Engineering Our Future

Summer 2014 Issue

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I hope you had a great start to 2014 and are having an enjoyable summer as well. The spring semester in the Whitacre College of Engineering was full of great accomplishments by our students, faculty, staff, and alumni.

In February, we celebrated the grand opening of our new \$22.8 million petroleum engineering research facility, the Terry Fuller Petroleum Engineering Research Building. Named in recognition of lead benefactors and Texas Tech University graduates, Terry and Linda Fuller, this 42,000 square foot building has set the national benchmark for petroleum educational facilities (page 8).

In April, ConocoPhillips presented the college with a \$1 million check to establish a student recruitment and support center in the college named the ConocoPhillips Center for Engineering Enrichment and Diversity (CPCEED). The CPCEED will enhance recruiting efforts among historically underrepresented groups and serve as a central location for student academic support services within the college (page 4). Our online graduate engineering programs were ranked second in the nation for veterans and 20th overall by U.S. News & World Report (page 5). Also in April, we recognized seven of our alumni at the 48th Annual Distinguished Engineer Awards Luncheon (page 10).

Each year, we recognize one of our top undergraduate students with the James A. McAuley Distinguished Engineering Student Award. This year, the award was presented to Amber Helm, who graduated Summa Cum Laude with a Bachelor of Science in chemical engineering with Honors (page 3).

The university recently presented two significant awards that reinforce our initiatives to promote excellent teaching and diversity within the college. The Department of Mechanical Engineering received the Texas Tech Teaching Academy's Departmental Excellence in Teaching Award, recognizing their commitment to promoting a teaching culture within the department (page 4). Additionally, the President's Excellence in Diversity and Equity Award was presented to myself and Jamie L. Perez, an assistant director in the Whitacre College of Engineering Dean's Office. The award highlights efforts to provide outstanding service to equity and diversity enhancement at Texas Tech University or in the community (page 4).

Our students and faculty are working to promote STEM outreach in the community. FIRST® Robotics Competition (FRC) Team 1817, a group of students from 10 Lubbock-area high schools and middle schools mentored by graduate and undergraduate Texas Tech students, won the FRC Hub City Regional as well as the Industrial Design award and the Industrial Safety Award at the 2014 FRC Dallas Regional (page 5). In April, more than 700 elementary and middle school students participated in Get Excited About Robotics (GEAR), an eight-week LEGO robotics challenge for students in grades K-8. Texas Tech freshmen engineering students mentor the elementary and middle school students and assist with robot programming (page 4). The Society of Women Engineers (SWE) at Texas Tech hosted "A Night at the Science Spectrum" in April as a way to introduce high school girls to opportunities in science, technology, engineering, and mathematics careers (page 7).

The Texas Tech American Society of Civil Engineers (ASCE) Student Chapter won second place in the ASCE Texas-Mexico Regional Concrete Canoe Competition held in April in Tyler, Texas (page 6). Also, Texas Tech recently hosted the American Society of Mechanical Engineers (ASME) District E Student Professional Development Conference and won awards in all three categories of student competition: poster, oral, and design (page 7).

External recognition for our students continues to pour in, including fellowships, awards, and research opportunities. Evelyn Lopez and Astrid Torres, chemical engineering doctoral students, were awarded Carl Storm Underrepresented Minority Fellowships (page 6), Andrew Fierro, an electrical engineering doctoral student, was awarded a Tom R. Burkes Outstanding Graduate Student Award and a \$5,000 fellowship from the IEEE Dielectrics and Electrical Insulation Society (page 7), and two mechanical engineering students were among the first responders to the Houston Ship Channel oil spill in March (page 6).

Our alumni are having great successes in their careers, from achieving top positions in corporations and organizations, to writing books, and to significant awards and fellowships. Read about all of these worthy recognitions on pages 12 and 13. There are also additional alumni updates on pages 14 and 15. Feel free to send us your updates at www.TTUEngineering.com by clicking on the red banner near the top of the page. We look forward to hearing about your successes!

The college would like to invite you to join us for a new event this fall during homecoming weekend. Held on Friday evening, October 17, the Engineering Homecoming Dinner is hosted by Young Guns, the college's young alumni organization. The event will be a time to connect with other alumni, faculty members, and celebrate homecoming together. Save the date for October 17!

I look forward to what the fall semester holds for the college. I anticipate even greater successes for our students, faculty, staff, and alumni. Keep in touch and enjoy your summer!



Dean Al Sacco Jr., Ph.D.

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Helm Receives McAuley Distinguished Engineering Student Award

The Texas Tech Whitacre College of Engineering has selected Amber Helm as the recipient of the 2014 McAuley Distinguished Engineering Student Award.



Helm

This award, provided by members of the Whitacre College of Engineering Dean's Council, is named in memory of James A. McAuley, an active member of the Dean's Council, and a Texas Tech Distinguished Engineer.

Helm competed for this honor and was selected because of her outstanding academic achievements, honors, activities, interests, and aspirations. She graduated Summa Cum Laude with a 3.93 GPA in May. She earned a Bachelor of Science in chemical engineering with Honors. She previously graduated in 2010 from Weatherford High School and is the daughter of Mark Helm and Lila Deakle.

As a freshman, she immediately became involved in undergraduate research projects in the Department of Chemistry and Biochemistry under Dominick Casadonte, the Minnie Stevens Piper Professor of Chemistry and Biochemistry. She worked with sonochemistry and its applications for the creation of batteries and hydrogen fuel cells.

After completing a study abroad program at the Texas Tech campus in Seville, Spain, Helm began her sophomore year as an Honors College mentor and joined two student organizations: Alpha Omega Epsilon (A.O.E.) and the Engineering Ambassadors.

A.O.E. is an international professional and social engineering sorority that strives to encourage self-confidence, professionalism, and motivation

among females in engineering. As an Engineering Ambassador, she assisted with college events, prospective student visits, outreach activities in the community, and recruiting for the college.

During the summer after her sophomore year, she worked for Encana Oil and Gas in Plano, where she was a drilling engineer intern. This experience with drilling rigs and the mechanics and procedures for drilling deep, high pressure, horizontal wells piqued her interest in the upstream oil and gas industry. The following summer she worked for Anadarko Petroleum Company in Denver, in the field and office as a production intern.

Helm began her junior year as event coordinator for A.O.E., a position that allowed her to gain leadership experience and build connections on campus. This year she was selected as a delegate to attend the A.O.E. international convention in Salt Lake City. She also became involved with the American Institute of Chemical Engineers, the Texas Tech Society of Petroleum Engineers, and the Texas Tech Tau Beta Pi Engineering Honor Society.

Helm recently ended her year-long tenure as the president of A.O.E., a position that she said she enjoyed because she had the opportunity to encourage younger students, make lifelong friends and see the organization grow nearly three times larger.

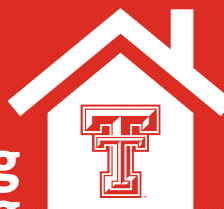
Reflecting on the challenges of a demanding chemical engineering program, Helm admits, "It took friends and family to encourage me and help keep me grounded when I wanted to give up. It took professors, classmates and my sorority sisters to keep me on the right track and focused."

Helm accepted a full-time position with Anadarko as a production engineer in Kermit, Texas, and began working in the field after graduation. She plans to remain involved at Texas Tech in the coming years as an alumnae advisor to A.O.E., a campus recruiter for Anadarko, and member of the Texas Tech engineering young alumni organization, Young Guns. **E**



Save the Date
Friday, October 17

**engineering
homecoming
dinner**



hosted by:

**YOUNG
GUNS**



News

ConocoPhillips Donates \$1M for Enrichment and Diversity Programs

ConocoPhillips and Texas Tech recently announced a \$1 million gift from ConocoPhillips to establish a student recruitment and support center in the college named the ConocoPhillips Center for Engineering Enrichment and Diversity (CPCEED).

The CPCEED will enhance recruiting efforts among historically underrepresented groups and serve as a central location for student academic support services within the college. The center will house the ConocoPhillips Bridge Program, which provides academic skills training, tutoring, peer mentoring, and other academic support services for incoming freshmen engineering students. It will also host the ConocoPhillips Diversity Lecture Series, which will provide semiannual lectures on diversity and inclusivity in the workplace. **E**



Perez and Sacco Receive Equity and Diversity Awards

Jamie L. Perez, assistant director in the Whitacre College of Engineering Dean's Office, and Al Sacco Jr., dean of the college, have been named recipients of the President's Excellence in Diversity and Equity Awards. Perez was the Staff Award Recipient and Sacco was the Senior Faculty Award Recipient.

These awards recognize individuals who provide outstanding service to equity and diversity enhancement at Texas Tech University or in the community, or with outstanding activities and projects that contribute to a better understanding of equity and diversity issues. **E**



Perez



Sacco

ME Wins Departmental Excellence in Teaching Award

The college's Department of Mechanical Engineering and its faculty and staff members have been recognized as the 2014 winner of the Texas Tech Teaching Academy's Departmental Excellence in Teaching Award. This award is presented in recognition of a department or comparable academic unit that has made unique and significant contributions to the teaching mission of the university and has esprit de corps in its dedication to the education of students at the undergraduate, graduate, and/or professional level.

Given as merited, it carries a \$25,000 prize, to be used for the enhancement of teaching in any way the department determines.

The general criterion for the award is the existence of a "teaching culture," which reflects commitment to students, makes teaching a high departmental priority, and facilitates teaching excellence throughout the department. **E**

700 K-8 Grade Students Compete in LEGO Robotics Challenge

Continuing her annual STEM outreach efforts, Dr. Tanja Karp, an associate professor of electrical and computer engineering, hosted more than 700 elementary and middle school students in April as a part of an eight-week LEGO robotics challenge called Get Excited About Robotics (GEAR). Teams build and program LEGO robots, using EV3/MINDSTORMS NXT kits to perform specified tasks. Students learn engineering skills through teams as they design, build, program, test, and troubleshoot robots.



GEAR Competition

Texas Tech freshmen engineering students mentor the K-8th grade students and assist with robot programming. In the last seven years, the competition has grown to include more than 150 participating teams from more than 50 schools in the Lubbock area and across the South Plains. **E**



Online Programs Ranked #2 for Veterans, #20 Overall by U.S. News

The college's online programs have been ranked second in the "Best Online Graduate Engineering Programs for Veterans" rankings by U.S. News & World Report. These programs also ranked 20th in the overall Best Online Graduate Engineering Programs.



Best Online Programs

Texas Tech's programs included in the ranking are:

- Doctor of Philosophy in Systems and Engineering Management
- Master of Science in Systems and Engineering Management
- Master of Science in Software Engineering
- Master of Engineering, including the interdisciplinary and healthcare engineering options

The rankings for veterans, in their second year, were designed to help veterans identify high-quality online degree programs that suit their educational needs.

The ranking methodology requires participation in four key programs, including: schools certified for the GI Bill; participating in the Yellow Ribbon Program or public institutions that charge in-state tuition for all out-of-state veterans; affiliated with schools that are members of the Servicemembers Opportunity Colleges (SOC) Consortium; and offer at least one course in the Defense Activity for Non-Traditional Education Support (DANTES) catalog.

The overall rankings are based on a survey conducted through the summer of 2013, respondents were asked to rank qualifying institutions based on student engagement, faculty credentials and training, student services and technology, and admissions selectivity.

"I am very pleased that the efforts of our faculty and staff are being recognized for the quality online programs they provide," said Al Sacco Jr., dean of the Whitacre College of Engineering. "It is especially satisfying that we are recognized for helping to educate our nation's veterans who have served and are serving our country. Texas Tech appreciates the service of these men and women, and this recognition emphasizes that we are truly a veteran friendly educational institution." **E**

Team 1817 Wins FRC Lubbock Competition and Awards at Dallas Regional



Team 1817, the Llano Estacado RoboRaiders at the FIRST Robotics World Championships in St. Louis

Under the guidance of Dr. Richard Gale, professor of electrical and computer engineering, FIRST® Robotics Competition (FRC) Team 1817 "The Llano Estacado RoboRaiders," were the winners at the FRC Hub City Regional, held March 6-8, in Lubbock. The team was the number one seeded team among 42 teams from eight states, Washington D.C., and three teams from China.

Team 1817 also received the Industrial Design Award sponsored by General Motors and the Industrial Safety Award sponsored by Underwriters Laboratories. In addition, team leader George Tan, a senior electrical engineering student, was recognized as outstanding mentor with the Woody Flowers Finalist Award.

The team also participated in the 2014 Dallas Regional on March 13-15. The team won the Industrial Design award and the Industrial Safety Award.

The RoboRaiders include students from 10 Lubbock-area high schools and middle schools, graduate and undergraduate Texas Tech students who act as mentors to these students, as well as parents, sponsors, and professional advisors. Each spring, teams are given six weeks to design, fabricate, and program a 120-pound robot that can perform all the tasks of the annual game.

The RoboRaiders, and their robot, Mantis, participated in the FIRST Robotics World Championships in St. Louis on April 23-26, the final stage of competition for the 2014 season. FIRST® is an international robotics program that strives to promote STEM awareness among young students and the community. It offers robotics programs for different age groups of students from Kindergarten through 12th grade. **E**



Student News

ASCE Places in Concrete Canoe Competition, Auld Wins Paper Competition



Texas Tech ASCE Student Chapter Concrete Canoe Team in April 2014

The Texas Tech American Society of Civil Engineers (ASCE) Student Chapter won second place in the ASCE Texas-Mexico Regional Concrete Canoe Competition held in April in Tyler, Texas.

Team members from Texas Tech included Angie Fealy, Jessica Fox, Devan Glover, Michelle Liner, Wade Morrison, Brennan Plemons, Casey Ramsey, Alan Salazar, Marian Schwarz, and Tyson Stagner.

Approximately 350 students representing 16 schools from Texas and Mexico competed in the 2014 competition. At the annual contest, participants build canoes with concrete and are judged in four categories: technical design report, oral design presentation, canoe final product, and racing.

The competition provides students with a practical application of the engineering principles they learn in the classroom, along with important team and project management skills they will need in their careers. The event challenges the students' knowledge, creativity, and stamina, while showcasing the versatility and durability of concrete as a building material.

Held in conjunction with the canoe competition, the Texas-Mexico ASCE Spring Student Symposium was also held at The University of Texas at Tyler in April 2014.

Donald Auld, a senior in the Department of Civil and Environmental Engineering, won first place in the Technical Paper Competition at the student symposium. **E**



Auld

Lopez and Torres Awarded Storm Underrepresented Minority Fellowships

Evelyn Lopez and Astrid Torres, chemical engineering doctoral students, were awarded Carl Storm Underrepresented

Minority (CSURM) Fellowships to attend the 2014 Gordon Research Conference (GRC) on Polymer Physics. Lopez is supervised by Dr. Sindee L. Simon, Horn Professor and Whitacre Department Chair, and Torres is supervised by Dr. Greg McKenna, Horn Professor and John R. Bradford Chair in Engineering. This program provides an opportunity for underrepresented minority graduate students, postdoctoral researchers, faculty members, and scientists to receive funding assistance to attend their first GRC. **E**



Lopez



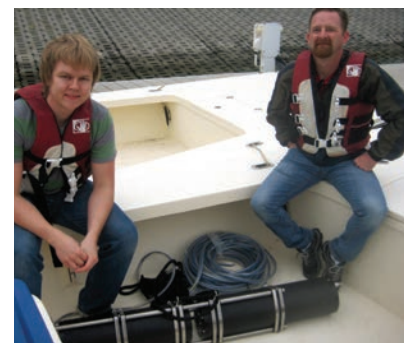
Torres

ME Students Among First Responders to Galveston Bay Oil Spill

In March, a cargo ship collided with a barge carrying approximately 4,000 barrels of bunker fuel oil in Galveston Bay, Texas. An estimated 168,000 gallons spilled into the Houston Ship Channel, prompting officials to shut it down for cleanup. Within days, scientists from two research consortia, including members from Texas Tech, funded by the Gulf of Mexico Research Initiative (GoMRI) were on site alongside government and industry workers, collecting baseline information to assess impacts.

Larry Brock and James Lassmann, mechanical engineering students, sampled water in the bay and used a 3D holography unit. The underwater system is used to profile oil and biological agents in the water column. **E**

Lassmann and Brock





Fierro Receives IEEE Burkes Award, IEEE DEIS Fellowship

Andrew Fierro, an electrical engineering doctoral student, was awarded a Tom R. Burkes Outstanding Graduate Student Award at the 2014 Institute of Electrical and Electronic Engineers (IEEE) International Power Modulator and High Voltage Conference. Named in honor of Dr. Tom R. Burkes, a former professor at Texas Tech, it established to recognize contributions in engineering, science, or technology associated with power modulation, power electronics, or repetitive pulsed power.



Fierro

Fierro was also awarded a \$5,000 fellowship from the IEEE Dielectrics and Electrical Insulation Society (DEIS). Fierro was selected for the fellowship because he submitted an outstanding proposal for his work on experimental and simulation techniques of low-temperature plasmas.

E

SWE Hosts Event, Promotes STEM to High School Girls

The Society of Women Engineers (SWE) at Texas Tech hosted "A Night at the Science Spectrum" in April as a way to introduce high school girls to opportunities in science, technology, engineering, and mathematics careers.



Science Spectrum Event

Novella Landau, a member of SWE, indicated their organization focuses on hosting events that help educate women about what engineering entails. "When I was in high school, I did not know what engineering was," Landau admitted.

This was second time SWE hosted this event and attendance grew to 37 this year. The organization is hopeful the event will grow and reach even more local high school girls in the future. E

Student Chapter Hosts ASME District E SPDC, Wins Awards

Texas Tech recently hosted the American Society of Mechanical Engineers (ASME) District E Student Professional Development Conference (SPDC). District E comprises the states of Arizona, Arkansas, Colorado, Louisiana, New Mexico, Oklahoma, Texas, Utah, and Wyoming, and the country of Mexico.

Texas Tech students and teams, under the supervision of mechanical engineering instructor Dr. Jeff Hanson and mechanical engineering professor Dr. Atila Ertas, won awards in all three categories of student competition: poster, oral, and design.

Michael Crump won first place in Old Guard Design competition and will attend the ASME 2014 International Mechanical Engineering Congress & Exposition (IMECE) in November to compete at the international level.



Crump

Texas Tech students and teams placed in the following competitions:

Old Guard Technical Poster Competition:

2nd Place:

Kristen Smith - "Design: Manufacturing Process of a Left Ventricular Testing Device"

3rd Place:

Danielle McNeese - "Unmanned Aerial Vehicle for the ASME 2014 Student Design Competition"

Old Guard Oral Presentation Competition:

1st Place:

Michael Crump - "Subsea Fluid Connector"

4th Place:

Brandon King - "Student Engineering Design: Triumph & Failure in a Quest of Optimization"

Student Design Competition:

2nd Place:

Team Gamma: Jesse Latimer, Danielle McNeese, Casey Chapman, Jake Hempel, Brett Anderson

4th Place:

The Dream Team: Courtney Billingsley, Brandon King, Andrew Fillingim, Cody Collins, Sterling Sanders, Ana Echeverria E





Terry Fuller Petroleum Engineering

A New Era in Petroleum Engineering Production and Operations Education

The Bob L. Herd Department of Petroleum Engineering celebrated the completion of its new \$22.8 million research facility with a ribbon-cutting ceremony in February, merging technological advancement with the excitement of future generations.

Funded entirely by industry and private contributions, the Terry Fuller Petroleum Engineering Research Building is named in recognition of lead benefactors and Texas Tech University graduates, Terry and Linda Fuller of Frisco, Texas, following a long-standing practice of honoring donors who contribute more than half the construction costs of a new building.

“Texas Tech’s Petroleum Engineering Department is one of the best in the country and now is home to one of the best facilities in the country as well,” said Chancellor Kent Hance. “Thanks to so many alumni, friends, and donors, this state-of-the-art building is not only a beautiful addition to our campus, but also will allow us to educate more students, expand research efforts, and make an even bigger impact on the petroleum energy industry.”

The primary goal of the new building is to provide a facility that integrates formal teaching environments with hands-on practical applications using cutting-edge research facilities and techniques. It houses 42,000 square feet of modern classroom and research

space, and sets the national benchmark for petroleum educational facilities.

“Ever since I started teaching at Texas Tech, I have dreamed of a facility that would allow me to teach from a visual aspect,” said Marshall Watson, chair of the Herd Department of Petroleum Engineering. “I wanted so much to bring to the class what I’ve done in the field for the last 30 years. This new facility fulfills that dream.”

Some of the highlights of the modern facilities include smart classrooms, state-of-the-art integrated research and teaching laboratories, and collaborative student study areas, which will keep Texas Tech students and faculty on the leading edge of petroleum engineering techniques and innovations. Additionally the increased space of the building will accommodate anticipated departmental growth for years to come.

There also is a new contribution to the Public Art Program, located in the courtyard to the south.

The new Terry Fuller Petroleum Engineering Research Building features a unique cluster of laboratories. Through a tight integration of these areas, a systems approach will be taken in petroleum engineering education that covers the entire spectrum of exploration and production, including business profitability analysis. Key courses in the new facility will address responsible and efficient use of water.

“The building is a testament to Texas Tech’s commitment to expanding petroleum engineering



Research Building



research,” said M. Duane Nellis, Texas Tech University president. “Together with this facility and its technology, the Herd Department of Petroleum Engineering will continue to lead the way, graduating top-quality engineers and sending them to meet the worldwide demands of the industry.”

The Herd Department of Petroleum Engineering is one of the largest petroleum engineering departments in the U.S. and is staffed with industry-experienced faculty. The department’s curriculum is focused on production, operations, and completion. This educational niche is critical, as Texas Tech is a major supplier of petroleum engineers to the Permian Basin and the energy industry worldwide.

At the request of donors, one of the building’s classrooms will be named the Herald Winkler Auditorium. The classroom, known as “The Wink,” honors Professor Emeritus Herald Winkler who served as professor and chair of the Bob L. Herd Department of Petroleum Engineering from 1970 to 1985.

“The Terry Fuller Petroleum Engineering Research Building will help prepare our students to be at the forefront of production engineering and will produce future energy leaders for the state of Texas and the world,” said Al Sacco Jr., dean of the Whitacre College of Engineering. “I cannot thank our friends and alumni enough for their foresight to provide us with the support to make this building and this approach to engineering education possible.” **E**

(Below) Terry Fuller (center) addresses the crowd gathered at the ribbon cutting ceremony on February 27, 2014.



(Above) The lobby of Terry Fuller Petroleum Engineering Research Building, showcasing the central integrated laboratories.





Distinguished Engineers

Seven Distinguished Engineer Award Winners Named

The Texas Tech University Edward E. Whitacre Jr. College of Engineering named Kenneth Baker, Lori Sisco Flansburg, Erna Grasz, Dr. Louis Gritz, Dr. Victoria Richards Harkins, Wade Smith, and Lloyd Whetzel as recipients of the 2014 Distinguished Engineer Award.

The award was established during the 1966-67 academic year to recognize Red Raider engineers. Since that time, 219 former students have received this honor. Recipients of the award must be distinguished in their profession, an inspiration to their peers, and have demonstrated a continuing interest in areas outside the field of engineering.

Kenneth Baker (1942-2013)

Baker graduated in 1965 with a Bachelor of Science in chemical engineering. He was the first recipient of a Master of Engineering degree from Texas Tech in 1970. After earning his degree in chemical engineering, Baker spent the next 28 years working for Celanese, the U.S. E.P.A., and two energy consultancies, becoming an acknowledged expert in accident investigations, property damage assessments, business interruption claims and other incident related matters for the downstream petroleum, natural gas and petrochemical industries.



Baker

In February 1993, Baker, along with his business partner John O'Brien, founded Baker & O'Brien, Inc., building it into a highly respected international energy consultancy. Baker & O'Brien, Inc. currently has offices in Dallas, Houston, and London, with clients around the globe. Over the last 30 years, Baker provided damage assessment and business interruption evaluations for almost every major petroleum and petrochemical accident in North America.

Lori Sisco Flansburg

Flansburg graduated in 1978 with a Bachelor of Science in mechanical engineering. After graduation, she joined Texas Instruments in Sherman, performing design engineering tasks to support the manufacture

of ground support radar systems and laser guided missiles. After completing her master's degree, Flansburg then worked for LTV Aerospace in Grand Prairie as the structural analysis lead for the design development of a major portion of the B-2 bomber. Flansburg joined Lockheed Martin Aeronautics in 1991. From 1991-1999, she was the F-22 Forward Fuselage Stress Technical Lead.



Flansburg

She currently is a Lockheed Martin Fellow at Lockheed Martin Aeronautics in Marietta, Ga., where she has responsibility as the technical coordinator for the Lockheed Martin Analysis Process manuals. She also is responsible for the development of the Structural Analysis technical training curriculum and course materials.

Erna Grasz

Grasz graduated in 1985 with a Bachelor of Science in electrical engineering. After graduation, Grasz established a reputation as a strategic leader with demonstrated success in diverse industries, including medical device, defense research and semiconductor capital equipment. Grasz co-founded Asante Africa Foundation in 2006 with two African women she met while in Tanzania and Kenya on travel. In 2010, she left the corporate world to manage the organization full time. Her strong leadership and business skills are the foundation of her transition to non-profit work: gather a group of talented individuals, give them a vision and mission to rally around, and then the impossible is achievable.



Grasz

As CEO of Asante Africa Foundation, she has transformed a three-country collaboration at its inception with one student in one community to one that currently impacts over 36,000 students and 39 communities in two countries and is poised for greater growth.

Dr. Louis Gritz

Gritz graduated with Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in mechanical engineering in 1988, 1990 and



1992, respectively. After completing his Ph.D. in 1992, Gritzto spent 13 years of his career at Sandia National Laboratories in Albuquerque, where he rose from technical staff member to manager. He oversaw a department of researchers, engineers and technologists who provided computational and experimental research, development and application solutions in fire science and technology for the Department of Energy and a number of other federal agencies. In 2006, Gritzto relocated to Massachusetts to join FM Global, one of the world's largest commercial property insurers.



Gritzto

He currently is vice president and manager of research for FM Global, overseeing a division of scientists, engineers, and technicians who assess property risk and identify solutions to prevent loss at commercial and industrial facilities for clients including one-third of the Fortune 1000.

Dr. Victoria Richards Harkins

Harkins graduated in 1992 with a Bachelor of Science in Biochemistry, and Master of Science and Doctor of Philosophy degrees in civil engineering in 1995 and 1998, respectively. After graduation, Harkins took a position as an engineer with the State of Texas in Austin. During her tenure working for the state, Harkins became a designated expert in water and wastewater utility service and served as the state's expert on numerous occasions. In late 2002, she went to work in the private sector for Dr. William H. Espey Jr. of Espey Consultants. In 2006, she opened her own civil and environmental engineering company, Harkins Engineering, Inc.



Harkins

Harkins currently provides professional civil and environmental engineering services for King Ranch, Inc. and provides municipal engineering services for several municipalities. Now considered an expert in water quality and water quality restoration, she has successfully developed restoration plans for a wide variety of hazardous and non-hazardous contaminants of concern all over Texas.

Wade Smith

Smith graduated in 1989 with a Bachelor of Science in mechanical engineering. Smith began his career with the Central and South West Corporation (CSW) in 1989 as an engineer, eventually working at several facilities in Texas and central Florida. CSW merged with American Electric Power (AEP) in 2000. He then became director of gas turbine and joint venture – generation. From 2000 to 2004, he was executive director of IPP and wind, and had responsibility for 12 independent power projects. Moving to AEP Transmission in 2008, he worked as managing director of transmission, and then vice president of transmission engineering and project services.



Smith

Smith is currently president and chief operating officer for AEP Texas. He oversees distribution operations serving more than 1 million AEP customers in South, Central and North Texas as well as the operating unit's safety, customer services, marketing, communications, community affairs, governmental affairs, and regulatory functions.

Lloyd Whetzel

Whetzel graduated in 1993 with a Bachelor of Science in electrical engineering technology. He worked for 22 years at Texas Instruments' Lubbock wafer fab, holding engineering and management positions in process engineering, equipment engineering, and manufacturing. In 1998, TI made a decision to close the Lubbock facility. He and a small group of other TI employees made the decision to leave TI, remain in Lubbock, keep the fab operational, and convert it to an analog/mixed-signal foundry, which became X-FAB Texas, Inc.



Whetzel

Whetzel is now the president and CEO of X-FAB Texas, and has been a managing director of the company since its inception. X-FAB Texas employs approximately 400 people. More than 40 of the approximately 60 engineers at X-FAB Texas are graduates of Texas Tech.

For more information, visit www.coe.ttu.edu/de **E**





Alumni News

Maldonado Named Chancellor of Houston Community College

Dr. Cesar Maldonado, a 2008 graduate with a Doctor of Philosophy in systems and engineering management, has been named the chancellor of Houston Community College (HCC).



Maldonado

Maldonado is an accomplished engineer, civic and business leader, and higher education administrator. Before coming to HCC, he served as president of Texas State Technical College in Harlingen.

Maldonado's business experience includes strategic planning, project management, infrastructure design, industrial systems, and software design. Maldonado holds Bachelor and Master of Science degrees in chemical engineering from Texas A&M University, and is an alumnus of the University of California, Berkeley's Walter A. Haas School of Business. **E**

Priestley Receives Sloan Research Fellowship

Rodney D. Priestley, a 2003 graduate with a Bachelor of Science in chemical engineering and an assistant professor of chemical and biological engineering at Princeton University, is the recipient of a 2014 Sloan Research Fellowship from the Alfred P. Sloan Foundation.



Priestley

He conducts research on the physics of polymeric materials and the development of novel polymeric systems as responsive and self-healing materials and membranes.

Awarded annually since 1955, the Sloan Research Fellowships are given to early-career scientists and scholars whose achievements and potential identify them as rising stars, the next generation of scientific leaders. **E**

King Named COO of Primoris Services Corporation

David King, a 1974 graduate with a Bachelor of Science in mechanical engineering, has been named chief operating officer of Primoris Services Corporation.



King

He previously worked for CB&I, where he served as president of Lummus Engineered Products. He has extensive engineering and construction industry experience in energy-related projects, LNG, offshore, pipelines, refining, petrochemicals, gas processing, oil sands, synthesis gas, and gas-to-liquids. He also holds an M.B.A from the University of Texas, Tyler, and an Advanced Executive Management Degree from Insead University in Fontainebleau, France.

Founded in 1946, Primoris, through various subsidiaries, has grown to become one of the largest construction service enterprises in the United States. **E**

Bourdon Named President and CEO of Enable Midstream Partners

Lynn L. Bourdon III, a 1984 graduate with a Bachelor of Science in mechanical engineering, has been named president and CEO of Enable Midstream Partners, LP. He joins the company from Enterprise Products Partners, LP, where he most recently served as group senior vice president of NGL and Natural Gas Marketing, Petrochemical, Refined Products and Marine Services.



Bourdon

Enable Midstream owns, operates and develops natural gas and crude oil infrastructure assets, including approximately 11,000 miles of gathering pipelines, 11 major processing plants, approximately 7,800 miles of interstate pipelines, approximately 2,300 miles of intrastate pipelines, and eight storage facilities comprising 86.5 billion cubic feet of storage capacity. **E**



Eburi Named Young Engineer of the Year by SPE Gulf Coast Section

Simeon Eburi, a 2006 and 2007 graduate with a Bachelor of Science and a Master of Science in petroleum engineering, respectively, has been named the 2014 Young Engineer of the Year for the Society of Petroleum Engineers (SPE) Gulf Coast Section (GCS).



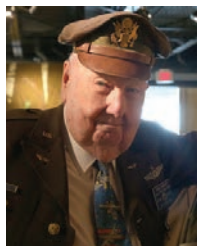
Eburi

He is a petroleum engineer with Chevron Corp. and works in Chevron's Energy Technology Co. (ETC) in the shale unit as a reservoir and simulation engineer and provides support and expertise to Chevron's unconventional and shale assets worldwide. In 2011, he joined the SPE GCS Young Professionals Board as Emerging Engineers Conference co-chair.

Eburi is a founding member and serves on the board of Young Guns, the college's young alumni organization. **E**

Hanley Writes Book on WWII POW Experience

Fiske Hanley II, a 1943 graduate with a Bachelor of Science in aeronautical engineering from Texas Tech, recently published his book, "Accused American War Criminal," with the Texas Tech University Press. The book explains the war in the Pacific theater and captures his experience as a Special Prisoner.



Hanley

Kept in overcrowded, filthy dungeon cells in Tokyo, he and his fellow soldiers were designated to be tried and executed for the killing of innocent women and children. While awaiting trial they were considered subhuman—starved on half POW rations, issued no clothes or basic hygienic needs, denied medical treatment and allowed to suffer and die from torture.

The book is available from the Texas Tech University Press in hardcover and as an e-book. **E**

Martin Leading NM Energy, Minerals and Natural Resources Department

F David Martin, a 1960 graduate with a Bachelor of Science in chemical engineering, is now the cabinet secretary for the New Mexico Energy, Minerals & Natural Resources Department.



Martin

The department has six divisions: Administrative Services, Energy Conservation and Management, Mining and Minerals, Oil Conservation, State Forestry and State Parks.

Martin's career includes extensive experience in the field of energy as an engineer and as a policy coordinator between the state of New Mexico and the United States Department of Energy. Before his appointment as cabinet secretary at the New Mexico Environment Department, Martin served as an adjunct associate professor at the New Mexico Institute of Mining and Technology. **E**

Augsburger Named to NAMM Board of Directors

Blake Augsburger, a 1987 and 1989 graduate with a Bachelor of Science and a Master of Science in electrical engineering, has been named to the board of directors of the National Association of Music Merchants (NAMM).



Augsburger

The NAMM Board of Directors guides and leads NAMM and NAMM Foundation and offers counsel to the music product industry.

Augsburger is president of HARMAN Professional, a global manufacturer and marketer of professional audio, musician and lighting technologies. As executive vice president and country manager for the Americas at HARMAN International, he also plays a leading role in the company's consumer and automotive businesses. He was honored as a Distinguished Engineer by the Whitacre College of Engineering in 2009. **E**



Alumni Updates

Whitacre College of Engineering Alumni Updates

1954

Allan Tomlinson, a 1954 graduate with a B.S.Ch.E. lives in Dallas, Texas.

1956

Leonard Gaston, a 1956 graduate with a B.S.T.E. has retired for a second time. He earned an M.B.A. in 1964 and a Ph.D. in business administration at The Ohio State University in 1969. After 32 years with the United States Air Force, he joined the faculty of Central State University, serving for 24 years and retiring in December 2013. He e-published the book "Hypothesis Testing Made Simple" in March 2014. He lives near Cincinnati, Ohio.

1976

Albert G. McDaniel, a 1976 graduate with a B.S.P.E., won the Republican Party primary and is now the 2014 Republican candidate for District 95 of the Texas House of Representatives. He is a professional engineer and lives in Fort Worth, Texas.

1980

Jean Abiassi, a 1980 graduate with a B.S.C.E. and an M.S.C.E., works for Zachry Construction Corporation and lives in San Antonio, Texas.

1982

Alberto "Bert" Cruzan, a 1982 graduate with a B.S.C.E., recently completed a one-year assignment as chief of engineering for the Afghanistan District Corps of Engineers in Khandahar, Afghanistan and a three-year assignment as chief of technical affairs serving as the senior engineering advisor to the Saudi Arabian National Guard in Riyadh, Saudi Arabia. He now lives in San Antonio, Texas.

1984

Arthur Eggers, a 1984 graduate with a B.S.E.E., is an associate department chair in the Computing and Information Technology Department for the College of Southern Nevada. He lives in Las Vegas, Nevada.

1984

Dean Brown, a 1984 graduate with a B.S.C.E., received a M.S.C.E. (structural engineering emphasis) in May 2013 from the Missouri University of Science and Technology. He also received an M.B.A. in 2000 from Centenary College of Louisiana. He joined Lauren Engineers & Constructors in June 2012 after working for Jacobs Engineering for three years on the Fort Bliss \$4 billion military base expansion. He lives in Corinth, Texas.

1998

Mike Mathena, a 1998 graduate with a B.S.C.E., works for Bleyl & Associates and lives in Conroe, Texas.

2000

Derrick Anderson, a 2000 graduate with a B.S.P.E., is an East Team asset supervisor for Denbury Resources Inc. and lives in Frisco, Texas.

2007

Tun-Chun Yuan, a 2007 graduate with an M.S.I.E. lives in Union City, Calif.

2008

Ross Brown, a 2008 graduate with a B.S.P.E., is a senior drilling engineer in Deepwater GoM Exploration for ConocoPhillips. He lives in Houston, Texas.

2010

Preston Sherrard, a 2010 graduate with a B.S.P.E., recently accepted a transfer to Dallas, Texas from Oklahoma City, Okla. with Baker Hughes Inc.

Mahdi Naser Moghadasi, a 2010 graduate with an M.S.C.S., is a senior software engineer in the revenue management group for American Airlines. He is the author of "The Incremental Pruning Filters for POMDPs - Past Present Future," which is available through Amazon and other retailers.

Nicholas Nelson, a 2010 graduate with a B.S.M.E., works for Gerdau Long Steel North America and lives in Arlington, Texas.



2011

Joel C. Ament, a 2011 graduate with a B.S.M.E., is a first lieutenant for the United States Marine Corps and lives in Kailua, Hawaii.

Michael Sullivan, a 2011 graduate with a B.S.P.E., is a production engineer for ConocoPhillips Alaska and lives in Anchorage, Alaska.

JiaLiang Ni, a 2011 graduate with an M.S.E.E. lives in New Taipei City, Taiwan.

Chris Rubio, a 2011 graduate with a B.S.Ch.E., works for Energy Transfer Partners in Fort Worth, Texas.

2012

Jordan Huneycutt, a 2012 graduate with a B.S.C.E., began working for Homeyer Engineering in Lewisville, Texas in December 2013, performing civil engineering and site development services for residential and commercial sites.

Joseph Campos, a 2012 graduate with a B.S.M.E., recently started his own innovation consulting business called Engineered Life Solutions Inc. The firm specializes in the architecture, engineering, and construction industry in the Dallas-Fort Worth area.

Jesus Esquivel Carl-Acosta, a 2012 graduate with a B.S.M.E., is a platoon leader in charge of 28 combat engineers for United States Army and lives in North Pole, Alaska.

Harpal Singh, a 2012 graduate with a B.S.I.E., works for Cameron International Corporation and lives in Houston, Texas.

2013

Joshua Evans, a 2013 graduate with a B.S.I.E., works for ExxonMobil and lives in Dallas, Texas.

Braden Pate, a 2013 graduate with a B.S.Ch.E., works for Occidental Petroleum Corporation and lives in Houston, Texas.

Scott Ross, a 2013 graduate with a B.S.Ch.E., works for Cotey Chemical Corporation in Lubbock, Texas.

Submit your updates at www.TTUEngineering.com. Find us at [www.twitter.com/TTUEngineering](https://twitter.com/TTUEngineering) or www.facebook.com/TexasTechEngineering. **E**

Save the Date

Friday, October 17

**engineering
homecoming
dinner**



**Save the date for a
special dinner in
Lubbock during
homecoming weekend
for engineering
alumni and friends.**

hosted by:

**YOUNG
GUNS**





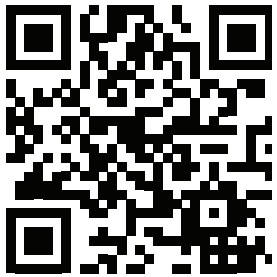
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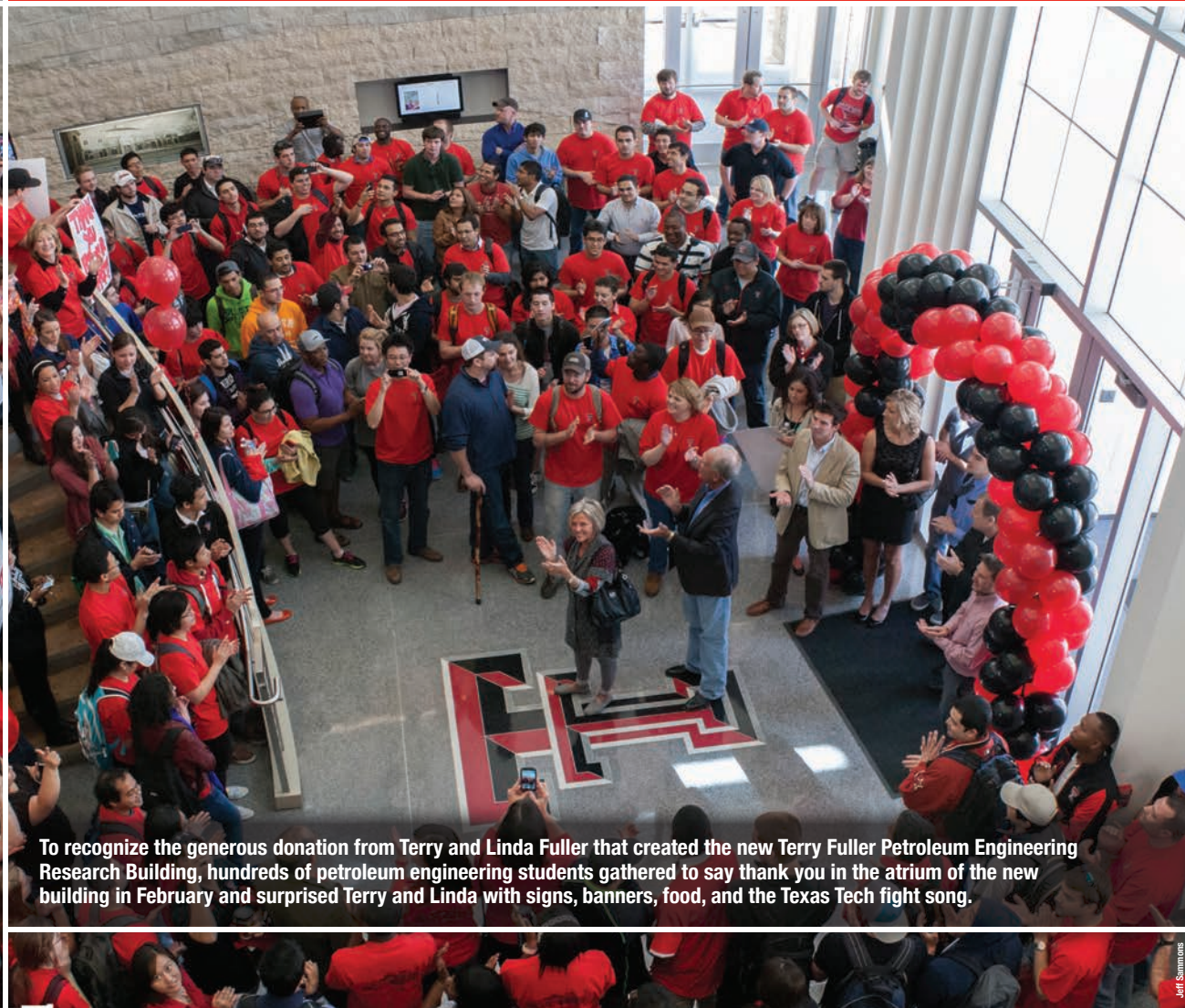
CHANGE SERVICE REQUESTED



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Summer 2014



To recognize the generous donation from Terry and Linda Fuller that created the new Terry Fuller Petroleum Engineering Research Building, hundreds of petroleum engineering students gathered to say thank you in the atrium of the new building in February and surprised Terry and Linda with signs, banners, food, and the Texas Tech fight song.

To receive an electronic version of this newsletter or to send us your updated information, visit www.TTUengineering.com.