



TEXAS TECH UNIVERSITY

# Advisory

## FOR IMMEDIATE RELEASE

DATE: Aug. 1, 2016

CONTACT: Jared Strange, [jared.strange@ttu.edu](mailto:jared.strange@ttu.edu)  
(806) 834-6952

**MEDIA: There will be media availability from 9:30-10:30 a.m. Thursday (Aug. 4) at LHUCA, 511 Ave. K. Campers will participate in art and music classes.**

### **East Lubbock Children Learn Art, Music, Theatre and Dance at Summer Camp**

The camp, a joint project between the College of Visual & Performing Arts and the East Lubbock Promise Neighborhood, is in its second year.

**WHAT:** The second annual East Side Arts Camp, sponsored by the [East Lubbock Promise Neighborhood](#) (ELPN), the Texas Tech University [College of Visual & Performing Arts](#) (CVPA), and the Louise Hopkins Underwood Center for the Arts (LHUCA)

First- through fifth-graders from Alderson, Ervin, Harwell and Hodges elementary schools will take classes in art, music, theatre and dance under the guidance of Texas Tech students, staff and alumni. The students will spend Thursday afternoon (Aug. 4) painting the interior of the ELPN building on Parkway Drive and conclude the camp with a public showcase of their work at the First Friday Art Trail.

**WHEN:** Camp: 9 a.m. to 2:30 p.m. Monday through Thursday (Aug. 1-4), 12:30-6 p.m. Friday (Aug. 5)

First Friday Art Trail presentation: 6-7:30 p.m. Friday (Aug. 5)

**WHERE:** Christine DeVitt Icehouse and Graffiti Education Building: 511 Ave. K

### **About ELPN**

ELPN is a part of the Promise Neighborhood initiative from the U.S. Department of Education and has been serving the schools and community at large in East Lubbock since 2013. The CVPA has played an important part in ELPN's efforts by providing a variety of programs to ensure quality art and art education are available to East Lubbock residents. The East Side Arts Camp ensures that kind of programming is extended to willing and able children outside the regular structure of the school year.

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# News Release

## **FOR IMMEDIATE RELEASE**

DATE: Aug. 1, 2016

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(806) 742-2136

### **Fraze Named Interim Dean of the College of Agricultural Sciences and Natural Resources**

He has served as chair of the  
Department of Agricultural Education and Communications since 2008.

Steve Frazee, chairman of the Texas Tech University [Department of Agricultural Education and Communications](#), has been named the interim dean of the [College of Agricultural Sciences and Natural Resources](#).

Fraze will fill the position held by Dean Michael Galyean, who was recently named as the interim provost. Lawrence Schovanec, who was previously the provost, was named the new president of Texas Tech. Both began in their new roles on Monday.

"I am pleased that Dr. Frazee will take over a position that is critical to the Texas Tech University System," Schovanec said. "The College of Agricultural Sciences and Natural Resources will be a key contributor to the system's plan to develop a College of Veterinary Medicine in Amarillo, and graduates of the college are leading the way in both academia and the agriculture industry around the world."

Fraze has served as chairman of Agricultural Education and Communications since 2008. He joined the department in 1988 and became a professor in 2004. He also has held the Shirley L. and Lucille Garrison Endowed Chair in Rural Youth Development since 2012.

A native of Dora, New Mexico, Frazee earned his bachelor's degree in agriculture from Lubbock Christian College in 1975 and earned his agricultural teaching certification from Texas Tech a year later. He received his master's in education from Texas Tech and his doctorate from Texas A&M University.

"I am excited about the opportunity and challenges of serving the college and Texas Tech University in this role," Frazee said.

Fraze previously was a visiting instructor in Texas A&M's Department of Agricultural Education and a vocational agriculture teacher in New Home and Olton. He also served as a district engineer in the Dowell Division of Dow Chemical in Monahans.

He was honored as the Outstanding Agricultural Educator Award in 2015 at the Western Region American Association for Agricultural Education Conference. The group is dedicated to studying, applying and promoting the teaching and learning processes in agriculture.

Other recent honors for Fraze include National FFA 'VIP Citation'; American Association for Agricultural Education Senior Fellow; and president of the American Association for Agricultural Education.

He also has received the Gamma Sigma Delta Service to Agriculture Award, been elected to the Texas Tech Teaching Academy, and earned the Texas FFA Association Distinguished Service Award and Vocational Agriculture Teachers Association of Texas Distinguished Service Award.

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 3, 2016

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### **Intelligence Beyond His Years: 12-Year-Old Heads to Ivy League School**

Jeremy Shuler graduated from Texas Tech University Independent School District with his high school diploma and will begin college this fall at Cornell University.

Sitting across the room is a young boy playing Minecraft talking to his mom and dad in their Grand Prairie home. He's swinging his legs back and forth while sitting in the chair and bouncing around energetically. He's giddy and full of life, just like any other kid at his age.

His favorite things are reading books like the "Divergent" series, "Diary of a Wimpy Kid," math books, watching "Cosmos" and traveling with his family.

Although he appears to be an average, everyday kid, there is nothing average about him. His name is Jeremy Shuler, and he is about to embark on an adventure only a rare number of kids his age has done before.

Just a few months ago he visited Texas Tech University for a graduation. No, it wasn't for an older brother or sister; it was for him. At just 12 years old he graduated with his high school diploma from [Texas Tech University Independent School District](#) (TTUISD), a flexible online education program that allows K-12 students to earn credits at their own pace.

His new adventure, you ask?

Well, he's going to college this fall but not just any college.

Cornell University, an Ivy League institution in Ithaca, New York.

### **Early-developer**

The son of two aerospace engineers, Jeremy was a good, curious baby and began reaching his milestones a lot quicker than the average infant.

At 6 months, he began to talk. At 8 months, he could name certain things. At 18 months, he could read Korean as his mother grew up in Seoul, South Korea.

When he was 2 he had learned both the Korean and English languages and could read books all on his own. About the time he was 8 years old, he was working on high school curriculum.

Harrey, his mother who quit her career to focus on Jeremy, said it was difficult to keep Jeremy challenged academically due to how quickly he was able to learn things.

“Early on we realized Jeremy wasn’t really ordinary,” said Harrey. “We briefly considered sending him to a charter school or a school for the gifted and talented, but in the end there wasn’t much of a choice because he was way too advanced to be enrolled in any traditional schools. So I quit my career to dedicate my time to teaching Jeremy myself. I have been homeschooling him ever since.”

While homeschooling Jeremy, Harrey, who has her doctorate in aerospace engineering from the University of Texas-Austin, assisted him in his studies, but there were some courses she didn’t have to assist him with.

One of those courses was chemistry, which Jeremy taught to himself.

At the age of 11, Jeremy had completed all of his high school courses and was ready for the next stop on his education journey: college. The only problem though was that he needed a high school diploma or a GED, but due to his age he couldn’t get his GED because he wasn’t 18.

His father, Andy, and Harrey knew they needed to figure out a way to move Jeremy on to his college education because there wasn’t much they could do for him anymore. When they began researching other education programs, they stumbled upon TTUISD.

### **Finishing high school with TTUISD**

Jeremy and his family traveled a lot due to Andy’s job with Lockheed Martin as an engineer, which is why homeschooling worked so well with their lifestyle. When Andy and Harrey began searching for another high school program, they thought TTUISD would be a good fit as it would continue to work with their “on-the-go” lifestyle.

“When we were looking at different programs we wanted some place that would acknowledge his achievements already so he wouldn’t have to go through several years of learning the same things over and over again,” Harrey said. “When I looked at TTUISD, their curriculum had more variety, offered the flexibility we wanted for travel and recognized the work Jeremy had already completed.”

The Shuler family worked closely with TTUISD instructors and counselors, including Lisa Stone, Jeremy’s academic adviser.

“I contacted Lisa a lot, especially when it came time for Jeremy to apply to colleges,” Harrey said. “During Jeremy’s time at TTUISD, we talked to her so much over the phone and through email, but had never met her and the other TTUISD staff until Jeremy’s



graduation. It was a good experience, because we felt like we had already known them even though we had never met them before.”

From courses to credit by exams and applying for college, Stone and other TTUISD staff helped the Shuler family through it all.

“Jeremy’s intelligence and passion for learning is truly inspirational,” Stone said. “I feel honored I was able to play a small part in Jeremy’s academic journey, and I really enjoyed working with such a special family.”

The two years Jeremy was enrolled at TTUISD, he said, was a good experience that made him a better person.

The variety of courses TTUISD offered helped him become a more well-rounded student as he took courses in web design, music history, astronomy, economics, government, physical education and more.

Some of the courses called for a lot of writing, which ended up helping Jeremy prepare for college as he enjoys math and science way more than English and writing.

“The curriculum was well-designed,” Jeremy said. “I learned a lot of new things, especially writing skills from English to astronomy courses. Before TTUISD I was mostly a math and science person, but at TTUISD I learned a lot of curriculum in other subjects.”

His favorite part about TTUISD was walking across the stage at graduation.

“I loved graduation,” he said. “It was cool seeing all of the other students graduating alongside me and meeting all of the TTUISD people.

“I really enjoyed TTUISD because it allowed me to get an actual high school diploma to be able to go to college, but it had the flexibility we needed for me to finish school. Overall, it made me a lot more experienced and prepared me for college.”

### **From young boy to Ivy League student**

At the age of 10, Jeremy began preparing for college by taking the SAT and advanced placement (AP) exams. Jeremy took the SAT exams in 2014, placing in the 99.6 percentile for all college-bound seniors that year. Andy and Harrey said Jeremy did better than they expected, but his elite-level success was one of the reasons they thought he was ready for college in the near future.

Jeremy also took seven AP exams and aced them all, receiving college credit in calculus, chemistry, mechanics, electricity and magnetism, statistics, microeconomics and macroeconomics. He was awarded AP Scholar with Distinction from the [College Board](#) for his effort in the seven exams.

In the fall of 2015, Jeremy began applying to various schools, including Cornell University, where Andy earned an engineering degree. Prior to his acceptance, Jeremy had a video interview with the Director of Engineering Admissions and the Assistant Dean for Student Services in Engineering. He was admitted to Cornell Engineering in March through the regular admissions process with special consideration given to his level of maturity and with the condition that his parents move to Ithaca to live with him.

“I was excited when I found out I got accepted to Cornell,” Jeremy said. “It is the best choice for me.”

When the acceptance letter came, Andy and Harrey were grateful to the university for being willing to take the chance on a 12-year-old boy.

Cornell Engineering Dean Lance Collins said the college believes Jeremy is ready for this opportunity.

“We have accepted Jeremy into our undergraduate program here at Cornell Engineering,” he said. “He is a very advanced student for his age who already has demonstrated an incredible ability to learn at the collegiate level.

“While this is highly unusual, we feel that with the strong support of his parents – who will be moving here to provide him a place to live and study – and his unusual talents and thirst for knowledge, he will be able to thrive as an engineering student and take advantage of all that Cornell has to offer.”

Though some people may be concerned about letting their kids go to college, no matter the age, Andy said it was time for Jeremy to go to college as Cornell will give him the chance to grow.

“He got through all of the math we could teach him by the time he was 10,” Andy said. “The chance for him to learn advanced math and physics will be really great to see. We love to see him grow, be challenged and excited about learning.

“It will be a change though. He will have to realize that he may not be the smartest person in the classroom anymore, but that will help him grow. If he’s up for the challenge, I think it will be good for him.”

Going to college doesn’t mean Jeremy will be living the life of an average college student. Due to his age, he will be required to live at home throughout his college years.

Thankfully, Lockheed Martin has a branch near Ithaca, so the family was able to transfer Andy’s job from Texas to New York easily. The Shulers have plans to live close to campus so Jeremy will be able to walk to and from class every day.

Following in his parents’ footsteps, Jeremy plans to major in applied and engineering physics and minor in mathematics. For the fall semester he plans to take courses in





multivariable calculus, physics in mechanics and spatial relativity, Introduction to Computing with MATLAB and introduction to linguistics or intermediate Latin, depending on his Latin placement test result.

One of the things he's most excited about, though, is the food at Cornell.

"We've been to Cornell a few times, visiting family, and their food is good, which is very important," Jeremy said with a giggle. "I'm also excited to learn new things and make new friends. Cornell will be different, though, especially in the first few weeks as I'll need help to navigate campus and get used to life at school because I've been homeschooled my whole life."

Sticking to his love for math and physics, Jeremy plans to pursue academia for his career. He will have graduated with his doctorate degree before he turns 21; that's normally the time people earn a bachelor's degree.

Not only is he focusing on college right now, he's also working to develop a radar signal encoding algorithm using Costas Array based on Sophie Germain prime numbers.

"I think Jeremy is pretty confident in himself and knows he's not like other kids," Harrey said. "But I think he accepts that. Being different isn't bad; it's just different. We want him to be happy and proud of whatever he eventually chooses to do with his life. My word of advice: don't try to mold your kids to what you think your kids should be."

Andy added how proud he and Harrey are of Jeremy.

"He has worked very hard and it's been a very interesting experience watching him grow up with us," he said. "We're just excited he has an opportunity to learn, grow and do what he's passionate about."

Preparing to be in the class of 2020, Jeremy is spending the rest of his summer getting ready for his first semester at Cornell while still enjoying his free time with his family.

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 3, 2016

CONTACT: Heidi Toth, [heidi.toth@ttu.edu](mailto:heidi.toth@ttu.edu)  
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### **Not So Ordinary: Project Uniting Dance, Social Sciences Wins National Award**

Professors Elizabeth Sharp and Genevieve Durham DeCesaro created “Ordinary Wars,” a project in which choreographers analyzed Sharp’s social sciences data on single and newly married women to create a dance performance.

Two Texas Tech University professors are being honored for their groundbreaking approach to transdisciplinary collaboration.

Genevieve Durham DeCesaro, a [dance](#) professor, and Elizabeth Sharp, a feminist [human develop and family studies](#) professor, are the creators of “[Ordinary Wars](#),” a performance that used kinesthetic analysis to mine Sharp’s datasets on young women’s choices related to singlehood, marriage and motherhood. DeCesaro choreographed the work from Sharp’s raw data, and Flatlands Dance Theatre, Lubbock’s professional dance company, has performed the concert several times throughout the United States.

The two then gave methodological papers at national and international conferences and published several articles, followed by a book, about the process of creating “Ordinary Wars,” highlighting the good, the bad and the challenges of taking diverse research methods and products and creating a collaboration that melded disparate disciplines into a project accessible to many people. The project was featured in the [London School of Economics blog](#), and Sharp discussed “Ordinary Wars” as the keynote speaker at a British conference.

The award-winning article, which was published in the December 2015 Journal of Family Theory and Review, won the 2016 Anselm Strauss Award for Innovation in Family Qualitative Research, sponsored by the Qualitative Family Research Network of the National Council on Family Relations.

The committee solicited nominations of qualitative articles published in 2015 from a large number of journals and narrowed the field to 22 articles for further consideration. The decision to select Sharp and DeCesaro’s paper was unanimous.

“As one reviewer noted: ‘not only is this innovative for family studies, but it pushes performative methods forward in a way that has not been done,’ said Justin Hendricks and Megan Haselschwerdt, co-chairs of the award committee. “Indeed, the authors point out performative research often lacks collaboration between artists and scientists, consisting instead of social scientists reworking performances for their needs. Their paper provides an example of the potential and importance of social researchers collaborating with trained

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artists and encourages increased transdisciplinary work while highlighting some of the difficulties and challenges it presents.”

The researchers were careful to highlight differing epistemologies, methodologies and analytical techniques as well as the struggles and benefits of working alongside a collaborator who teaches and researches such a contrasting subject. DeCesaro, who also is the associate vice provost for academic affairs, said they focused on the need in academia to give attention and weight to the processes, as well as the products, of transdisciplinary research.

“We are particularly interested in the ways in which transdisciplinary research projects can identify and make use of innovative methodological practices to inform, in some really new and interesting ways, our more standard disciplinary practices,” DeCesaro said, adding she was thrilled when she learned they had won. “Perhaps most exciting was the statement from the award committee spokesperson that the committee felt our paper was a ‘tremendous model for future innovation in qualitative methods.’ That is, after all, what we are about: creating transformative change.”

Sharp said “Ordinary Wars” originated in response to a call from the [Office of the Vice President for Research](#) for innovative transdisciplinary projects. The two wanted to create a project that pushed the boundaries of their respective fields and within traditional academics, and she’s honored an organization in her field recognized the value of the transdisciplinary nature of “Ordinary Wars.”

“This award is prestigious in my field; it is named after one of the most renowned qualitative researchers in the world,” she said. “To be given an award named after Anselm Strauss is truly an incredible honor and privilege.”

Sharp and DeCesaro will present their paper, as well as “Ordinary Wars,” at a conference in Colorado on Thursday (Aug. 4). Read more about the research and creation of “Ordinary Wars” [here](#).

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TEXAS TECH UNIVERSITY

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## FOR IMMEDIATE RELEASE

DATE: Aug. 3, 2016

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### **Texas Tech Alumnus Andres Alcantar to Speak at Summer Commencement**

The distinguished public administrator, who currently serves as chairman for the Texas Workforce Commission, received his bachelor's and master's degrees from Texas Tech.

Texas Tech University alumnus Andres Alcantar, chairman and commissioner representing the public of the Texas Workforce Commission, will speak at Texas Tech's summer 2016 commencement ceremony on Aug. 13 at United Supermarkets Arena.

Alcantar received both his bachelor's and master's degrees in [public administration](#) from Texas Tech before beginning his notable career in public service. His experience includes directing the Texas Health and Human Services Commission, serving as an adviser to former Gov. George W. Bush in the Office of Budget and Planning and serving as deputy director of the Governor's Budget, Planning and Policy Division.

As chairman and commissioner representing the public, Alcantar works for the Texas Workforce Commission to implement customized services to meet the needs of Texas industries and advance the development of a strong and competitive workforce. Along with promoting the expansion of industry-based partnerships, Alcantar encourages the preparation of students for postsecondary success at work and in the classroom. These preparatory strategies focus on science, technology, engineering and math (STEM) initiatives as key components of future workforce competitiveness in Texas.

"Andres Alcantar is a champion of STEM education and ensuring opportunities exist in these areas for K-12 and college students," Texas Tech President Lawrence Schovanec said. "We place great emphasis on STEM education at Texas Tech University and are fortunate to have Mr. Alcantar address our graduates as they prepare to enter the workforce."

The Texas Workforce Commission oversees and delivers the state's employment, training, child care, adult education and unemployment insurance programs. Alcantar's work as chairman and commissioner has helped the Texas Workforce Commission execute its mission of promoting and supporting a workforce system that creates value and offers employers, individuals and communities the opportunity to achieve and sustain economic prosperity.

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# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 3, 2016

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### **Texas Tech Names Director for Office of Research Commercialization**

David Snow has served as the interim director since July 2015.

After a year as the interim director, [David Snow](#) now has officially taken the reins of Texas Tech University's [Office of Research Commercialization](#) (ORC).

The focus of the ORC is to work with [Texas Tech University System](#) researchers, their research discoveries and businesses to commercialize ideas to better society. As the director, Snow is responsible for intellectual property and licensing activity across the Texas Tech University System, including Texas Tech, [Angelo State University](#), the [Texas Tech University Health Sciences Center](#) (TTUHSC) and the [TTUHSC Paul L. Foster School of Medicine](#) in El Paso.

As a licensed patent agent, Snow serves as managing director of intellectual property for the Texas Tech University System, where he is responsible for the assessment, protection and management of the intellectual property portfolio. In addition, he manages the Technology Review Team and relations with external patent firms.

"I am very excited about the opportunity to serve my friends and colleagues within the Texas Tech community in this new capacity," Snow said. "The innovation and commercialization ecosystem is poised to have a remarkably positive impact on the West Texas region, and I am blessed to be part of it."

When it comes to research commercialization, Snow has personal experience. He launched a startup company that offers consultation and marketing support for biotechnology and clinical diagnostic providers developing research concepts into marketable products. He also has served in varying capacities in four other startups since 2008, two of which are businesses operating outside the technical space.

"David has long been a part of the Texas Tech community," said Guy Loneragan, Texas Tech interim [vice president for research](#). "I am pleased he has accepted this leadership position in furthering the innovation and commercialization opportunities for the Texas Tech University System campuses."

Snow previously worked as a scientific liaison to healthcare practitioners for a privately held clinical laboratory startup specializing in molecular diagnostics, as a research scientist operating in the next generation genetic sequencing service space, and as a research scientist at [The Institute of Environmental and Human Health](#). There, his research

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in molecular pathology focused on the biofilm model of chronic disease and the contribution of microbial load to disease states in human health, specifically in relation to atherosclerosis, and zoonotic diseases.

Snow earned his bachelor's degree in [biochemistry](#), his master's degree in electro-analytical chemistry and his doctorate in chemistry from Texas Tech.

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TEXAS TECH UNIVERSITY

# Advisory

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DATE: Aug. 4, 2016

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### **Military, Veterans Programs Honoring Purple Heart Recipients in Ceremony**

The recognition ceremony will honor campus and local area Purple Heart recipients and one national scholarship winner and dedicate a new Purple Heart flag at Memorial Circle.

WHAT: Purple Heart Recognition Ceremony and flag dedication

WHEN: 10 a.m. Friday (Aug. 5)

WHERE: Memorial Circle, Texas Tech University campus

EVENT: Texas Tech University's [Military and Veterans Programs](#) and Military Order of the Purple Heart Chapter 0900 of Lubbock will honor nine campus and 53 local area Purple Heart recipients and one national scholarship winner during a Purple Heart Recognition Ceremony and flag dedication.

Juan Muñoz, senior vice president for the [Division of Institutional Diversity, Equity and Community Engagement](#) and vice provost for [Undergraduate Education and Student Affairs](#), will speak at the ceremony. The [Sabre Flight Drill Team](#) will raise a new Purple Heart flag in conjunction with the [Texas Tech Police Department](#).

Steve Oien, commander of the Military Order of the Purple Heart Chapter 0900 in Lubbock will present the 53 local area recipients, and Lou Ortiz, director of Military and Veterans programs will present the nine recipients from Texas Tech.

Kailey Snead, a sophomore zoology student from Lubbock, will be announced as a national Military Order of the Purple Heart Scholarship recipient. Snead is the granddaughter of a two-time Purple Heart recipient, George R. Snead of El Paso who is a retired chief warrant officer.

After the ceremony concludes, the Sabre Flight Drill Team and the Texas Tech Police Department will lower the new Purple Heart flag. The flag will be flown all day on National Purple Heart Day, Sunday (Aug. 7).



Following the Purple Heart Recognition Ceremony at 11 a.m. in the Escondido Theatre in the Student Union Building, Schovanec, Muñoz and Ortiz, along with Apurva Naik, project manager of the [College Credit for Heroes](#) program, will be available to speak to the media about the newly implemented College Credit for Heroes program at Texas Tech. The partnership was [announced July 25](#) with Central Texas College District in Killeen.

The College Credit for Heroes program, established by the Texas Workforce Commission, works to maximize the acceptance of college credits awarded to Texas veterans and service members for their military educational experiences and nontraditional learning.

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DATE: Aug. 4, 2016

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### **Texas Tech St. Jude Up 'til Dawn Wins Program of the Year Award**

The team also won an award for the highest year-over-year increase in funds raised.

Texas Tech University's [St. Jude Up 'til Dawn team](#) won Program of the Year, the highest award given at the annual St. Jude Collegiate Leadership Seminar in July. For the second straight year, it also won an award for having the highest year-over-year increase in funds raised to benefit St. Jude Children's Research Hospital.

The Program of the Year award recognizes the St. Jude collegiate school that implemented the most outstanding overall program. Considered in the judging process are how the executive board worked together, awareness and public relations efforts, recruitment, fundraising efforts, side events and the final St. Jude Up 'til Dawn event, an all-nighter featuring food, prizes, activities and more.

"It is not easy to describe the honor of having been awarded such a prestigious award as Program of the Year. I am beyond proud to have been able to help our organization achieve such recognition," said Evan O'Leary, the 2015-16 executive director for Texas Tech St. Jude Up 'til Dawn, a current member of the National Visions Committee and a senior economics major from Midland. "Just having come from the Collegiate Leadership Seminar, our executive board is both motivated and excited to continue the tradition of excellence here at Texas Tech. However we will not view this award as a prize but, rather, a challenge to continue to improve our program each year and excel beyond the expectations placed upon us."

The Texas Tech St. Jude Up 'til Dawn executive board set a fundraising goal of \$50,000 for the 2015-16 year, up from the \$30,780 raised in 2014-15 and the \$6,415 in 2013-14. When all was said and done, they more than doubled the goal, raising \$111,271. With that in mind, the group has set a goal of \$115,000 for 2016-17.

Texas Tech St. Jude Up 'til Dawn also was recognized as having the country's highest recruitment on national recruitment day, when 211 students registered to participate.

"I feel inspired. It's incredible to see a program that was on the verge of no longer existing on our campus becoming one of the most well-known and respected programs in the country," said Mark Khan, 2016-17 executive director for Texas Tech St. Jude Up 'til Dawn and a senior business marketing major from Round Rock. "It's incredibly humbling knowing that, as a student body and personally, we are able to contribute to a such an extraordinary cause, making a difference in the lives of so many."

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“There is a sense of pride and happiness, knowing a group of 11 passionate Texas Tech students could come together and inspire more than 800 students to join our movement and strive toward great heights in accomplishing St. Jude founder Danny Thomas’s mission of ‘no child should ever die in the dawn of life.’”

St. Jude Children’s Research Hospital works to find cures to childhood cancers. Research done there has helped push the survival rate for childhood cancer from less than 20 percent in 1962 to more than 80 percent today, according to its [website](#).

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# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 5, 2016

CONTACT: Glenys Young, [glenys.young@ttu.edu](mailto:glenys.young@ttu.edu)  
(806) 742-2136

### **Commercialization Expert to Moderate State Department Webinar**

Eli Velasquez will lead a discussion on how startups can compete in a saturated market.

[Eli Velasquez](#), Texas Tech University's director of venture development within the [Office of Research Commercialization](#), will serve as moderator and panelist for a U.S.

Department of State webinar next week focusing on how innovative new companies can carve out their niche.

The TechConnect webinar, "Disruptive Innovations: Making Competition Irrelevant," is scheduled for 10 a.m. CDT Tuesday (Aug. 9). As part of the State Department's Global Innovation through Science and Technology (GIST) program, the event will give insight from a panel of experts on how startup companies can create new, uncontested market space for their products instead of entering a market already saturated with competition.

Panelists will discuss their strategies based on research from hundreds of successful startups used to build and sustain lucrative companies.

In addition to Velasquez, the panelists are:

- Hemai Parthasarathy, scientific director of the Thiel Foundation
- Shintaro Kaido, Kauffman Fellow and director of Drexel Ventures, Drexel University
- Duygu Oktem, venture adviser for the European Investment Fund and founder of DO Consultancy LLC

The TechConnect webinars began after President Barack Obama's June 2009 speech in Cairo in which he stressed the importance of providing opportunities for education, innovation and economic development for people, young and old, in developing and war-torn countries. The State Department created the quarterly webinars as a means of disseminating knowledge across the world.

"For me, it is a privilege to represent Texas Tech on a global stage and share knowledge and insights from what some would consider a geographically isolated community," Velasquez said. "Yet, through the power of technology, we can reach the furthest corners of the world. Our university's motto could never be truer: From here, it is possible."

Velasquez's selection for the panel is the latest in a series of ongoing efforts at Texas Tech to promote and expand its innovation and technology commercialization opportunities:

- [Texas Tech Innovation Hub at Research Park](#): This 40,000-square-foot facility is designed to become a resource for the faculty, students and entrepreneurs of both

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Texas Tech and the Texas Tech University Health Sciences Center as well as community members interested in launching new ventures.

- [Texas Tech Accelerator](#): This intensive launch program provides mentoring, grants and education to startups and discovers licensing opportunities based on innovative and world-changing technologies developed in research labs at Texas Tech, NASA and Crane Naval Labs.
- [I-Corps](#): This intensive NSF program is designed to enable scientists and engineers to identify paths to market for inventions. Central to the program is the validation of commercialization hypotheses through a process of customer discovery.
- [Texas Tech Innovation Mentorship and Entrepreneurship \(TTIME\)](#): The organization is designed to create a culture of entrepreneurship across campus and is open to all undergraduate and graduate students from all majors. The group is a foundational effort to provide students with resources and support to turn their innovative ideas into reality.
- [Red Raider Startup](#): This is a 72-hour, learn-by-doing, campus workshop that teaches entrepreneurial skills to university students in an extreme hands-on environment.
- [Hub Camp](#): This is a 72-hour workshop focusing on how to articulate and develop a compelling business model in preparation for raising startup capital.
- [Global Laboratory for Energy Asset Management and Manufacturing \(GLEAMM\)](#): This collaboration connects unique field testing, certification and manufacturing facilities with university innovators and industry leaders to research, develop and commercialize technologies, services and next-generation power electronics.
- [Texas Tech Small Business Innovation Research \(SBIR\) and Small Business Technology Transfer \(STTR\) Resource Center](#): The federal SBIR/STTR programs provide funds for early-stage research and development at small U.S. businesses. The Texas Tech SBIR/STTR Resource Center serves the rural West Texas community and provides assistance to those starting small businesses with a technology research focus.

View the webinar [here](#).

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

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# News Release

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DATE: Aug. 5, 2016

CONTACT: George Watson, [george.watson@ttu.edu](mailto:george.watson@ttu.edu)  
(806) 742-2136

### **Design, Landscape Architecture Departments Combine to Fight Childhood Obesity** The OLE! Texas project will renovate child care play spaces in order to promote Outdoor Learning Environments.

A key component in the ongoing fight against childhood obesity is giving children a safe, innovative and fun place to play. In some instances, that can be a struggle.

A collaboration at Texas Tech University between the [Department of Design](#) and the [Department of Landscape Architecture](#) is aiming to change that. Through the Natural Learning Initiative (NLI) developed at North Carolina State University, the two Texas Tech departments are spearheading OLE! Texas, a multidisciplinary project that will create early childhood promotion strategies by renovating childcare center Outdoor Learning Environments (OLE).

“This is a great opportunity for Texas Tech to partner with state agencies, other universities and professional organizations to promote child health,” said Kristi Gaines, director of graduate programs in the Department of Design. “I am eager to learn from and work alongside such an accomplished group of professionals.”

The program’s first project in Texas will be done in Lubbock at a local child care center. A community presentation to open the project is scheduled for 6:30 p.m. Aug. 9 (Tuesday) at the Red Raider Lounge in the Student Union Building.

Gaines and Charles Klein, an associate professor in the Department of Landscape Architecture, are spearheading the effort at Texas Tech. Along with other local partners, they will design plans to transform the play space at the Covenant Child Care Center so that children and families have an exciting and stimulating OLE.

“This is an exciting opportunity to learn from a national leader about the design of outdoor play spaces,” Klein said. “I’m excited also to work with the Department of Design and the stage that this project will set for future collaborative research opportunities, both applied and scientific.”

The NLI is an effort spearheaded by North Carolina State to address early childhood obesity by improving conditions attending child care centers. It is designed to promote

the natural environment in daily life through environmental design, action research, education and information.

Gaines said the hope is this project will make Texas Tech's collaboration the model demonstration center for other child care centers in Texas.

The project is supported by the Obesity Prevention Program with the Texas Department of State Health Services and the Centers for Disease Control and Prevention.

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**CONTACT: Charles Klein, associate professor, Department of Landscape Engineering, College of Agricultural Sciences and Natural Resources, Texas Tech University, (806) 834-8409 or [charles.klein@ttu.edu](mailto:charles.klein@ttu.edu); or Kristi Gaines, director of graduate programs, Department of Design, College of Human Sciences, Texas Tech University, (806) 834-4699 or [kristi.gaines@ttu.edu](mailto:kristi.gaines@ttu.edu)**



# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 9, 2016

CONTACT: George Watson, [george.watson@ttu.edu](mailto:george.watson@ttu.edu)  
(806) 742-2136

### **Raider Red Meats Schedules Annual Barbecue and Ribeye Championship**

The event is once again sanctioned by the Kansas City Barbeque Society.

The annual Raider Red Meats BBQ & Ribeye Championship will be held Aug. 26-27, giving cooks locally and nationwide the opportunity to square off against each other.

The cookoff will take place on the southwest side of the [Department of Animal and Food Sciences](#) building in the C12 and C14 parking lots on the Texas Tech University campus. Raider Red Meats is a part of the Meat Science and Muscle Biology program.

“I’m really excited that Raider Red Meats BBQ & Ribeye Championship has grown to include some of the county’s biggest names in barbecue,” said Tate Corliss, director of Raider Red Meats. “We’re proud to host this event to promote barbecue, Raider Red Meats, Texas Tech and the [College of Agriculture Sciences & Natural Resources](#).”

Offering \$12,000 in cash and prizes, the Kansas City Barbeque Society (KCBS)-sanctioned event is the Texas State Championship. The event begins at noon on Friday (Aug. 26) with cook team check-in and meat inspection. At 7 p.m. there will be a KCBS cooks meeting for those competing in the KCBS portion of the program.

Saturday’s festivities begin at 9 a.m. with a steak cooks meeting for those cooking in the Steak Cookoff Association program. At 10:30 a.m., there will be a KCBS judges meeting.

Deadlines on Saturday for turning in submissions in the various categories are:

- Noon: KCBS chicken
- 12:30 p.m.: KCBS ribs
- 1 p.m.: KCBS pork
- 1:30 p.m.: KCBS brisket
- 2:30 p.m. Steak Cookoff Association
- 4 p.m.: award ceremony

The KCBS, a nonprofit organization dedicated to promoting and enjoying barbecue, is one of the world’s largest organization of barbecue and grilling enthusiasts with more than 20,000 members. The group sanctions more than 500 barbecue contests worldwide.

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From volunteering to actual event production, members offer assistance to civic and charitable organizations who organize events.

All questions can be submitted to Corliss at [tate.corliss@ttu.edu](mailto:tate.corliss@ttu.edu) or Ashley Kanaman at [ashley.kanaman@ttu.edu](mailto:ashley.kanaman@ttu.edu). Those interested can also visit the Raider Red Meats [website](#).

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

**CONTACT: Moriah Beyers, coordinator, Department of Animal and Food Sciences, College of Agricultural Sciences and Natural Resources, Texas Tech University, (806) 742-2805 or [moriah.beyers@ttu.edu](mailto:moriah.beyers@ttu.edu)**



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# Advisory

## FOR IMMEDIATE RELEASE

DATE: Aug. 9, 2016

CONTACT: Sarah Connell, [sarah.n.connell@ttu.edu](mailto:sarah.n.connell@ttu.edu)  
(806) 742-2136

### Texas Tech Releases Summer Commencement Schedule

The two ceremonies will take place at 9 a.m. and 1:30 p.m. on Saturday.

- WHAT: Texas Tech University hosts its summer commencement ceremonies.
- WHEN: Saturday (Aug. 13):
- 9 a.m.; [Rawls College of Business](#), [Edward E. Whitacre Jr. College of Engineering](#), [College of Human Sciences](#), University Programs, [College of Visual & Performing Arts](#), [Wind Energy](#) and [Graduate School](#).
  - 1:30 p.m.; [College of Agricultural Sciences & Natural Resources](#), [Architecture](#), [Arts & Sciences](#), [Education](#), [Media Communication](#) and Graduate School.
- WHERE: United Supermarkets Arena, 1701 Indiana Ave.
- EVENT: [Andres Alcantar](#), alumnus and chairman for the Texas Workforce Commission, will speak at both ceremonies. His experience includes directing the Texas Health and Human Services Commission, advising former Gov. George W. Bush in the Office of Budget and Planning and serving as deputy director of the Governor's Budget, Planning and Policy Division. He received both his bachelor's and master's degrees in [public administration](#) from Texas Tech.

Commencement ceremonies can be viewed online [here](#).

For more information regarding guest information, parking, hotel visit commencement [website](#).

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

**CONTACT: Amiee Dixon, commencement coordinator, Provost and SVP Academic Affairs, Texas Tech University** (806) 834-8309 or [amiee.dixon@ttu.edu](mailto:amiee.dixon@ttu.edu)

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## FOR IMMEDIATE RELEASE

DATE: Aug. 10, 2016

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### **Covenant Medical Center Chief of Staff to Speak at Military Stole Ceremony**

Dr. Larry A. Warmoth, a colonel in the Texas Air National Guard, is a graduate and assistant professor of medicine at the Texas Tech University Health Sciences Center.

- WHAT: Texas Tech University Military and Veterans Programs' graduation stole and family member recognition ceremony
- WHEN: 10:30 a.m. Thursday (Aug. 11)
- WHERE: Helen DeVitt Jones Auditorium, Texas Tech Museum, 3301 4<sup>th</sup> St.
- WHO: Chief of Staff Dr. Larry A. Warmoth with Lubbock's Covenant Medical Center will speak at this week's [Military and Veterans Programs](#)' (MVP) stole ceremony to recognize graduating veterans with their special, camouflage Texas Tech stole and family members with recognition certificates before commencement Saturday (Aug. 13).

Dr. Warmoth began his career in the U.S. Military through the U.S. Marine Corp's Platoon Leaders Corp. He transferred to the U.S. Navy and was later selected for Aviation Officers Candidate School in Pensacola, Florida. After earning his Wings of Gold, Dr. Warmoth was the distinguished graduate in his F-14A Tomcat course.

Later he was discharged from the U.S. Navy, earned his master's degree from Colorado State University and worked as a research scientist at the Centers for Disease Control and the University of Texas Southwestern Medical School in Dallas.

In 1992, he received his medical degree from the [Texas Tech University Health Sciences Center](#) (TTUHSC) and began his residency in internal medicine at the University of Arizona, where he was selected as chief resident in 1995 and became board certified in internal medicine.

While he built his medical career, he joined the Air Force Reserve where he completed his flight surgery training and graduated from F-16 flight school.

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In 2002, Dr. Warmoth returned to academia as a nephrology fellow, working with the physiology and diseases of the kidneys, and became board certified.

He has served as chief of medicine for eight years and vice chief of staff for two years before becoming chief of staff at Covenant Medical Center.

Free parking will be available at the west side parking lot of the museum, located at 4<sup>th</sup> Street and Indiana Avenue.

For more information about the stole ceremony, contact MVP Director Lou Ortiz by phone or email.

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

**CONTACT: Lou Ortiz, director, Military and Veterans Programs, Texas Tech University, (806) 742-6877 or [lou.ortiz@ttu.edu](mailto:lou.ortiz@ttu.edu)**



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# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 10, 2016

CONTACT: Heidi Toth, [heidi.toth@ttu.edu](mailto:heidi.toth@ttu.edu)  
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### **Tech Teach Recognized for Excellence in Teacher Preparation**

The Texas Education Agency recognized the program, which began in 2011, at a meeting in Austin last week.

An innovative teacher preparation program at Texas Tech University was recognized in Austin for its focus on quality of teaching and teacher preparation satisfaction.

[Tech Teach](#), which the [College of Education](#) introduced five years ago under the direction of Dean Scott Ridley, was chosen after a weeklong visit from Texas Education Agency (TEA) officials during the spring semester. Ridley, program director Doug Hamman and associate professor of education Fanni Coward received the recognition prior to the State Board for Educator Certification (SBEC) meeting on Aug. 4 in Austin.

Tim Miller, head of TEA Educator Preparation Quality Assurance, presented the recognition.

“Tim and several TEA staff members told us they wanted to highlight our program so all educator preparation providers will know about Tech Teach, ‘be jealous’ and adopt similar methods and high standards,” Ridley said.

In offering the recognition, TEA officials said Texas Tech has exceeded the SBEC minimum standards to provide outstanding preparation for teacher candidates and highlighted national achievements, such as being identified as a national model by the Council for the Accreditation of Educator Preparation and [winning a grant from the Bill and Melinda Gates Foundation](#) to support other teacher preparation programs through the [U.S. PREP National Center](#).

Tech Teach puts teacher candidates into the classroom for a year and requires 275 hours of field-based experiences. SBEC requires 12 weeks of clinical teaching and 30 hours of field-based experiences. Tech Teach also created partnerships with school districts to share data and allow university and district administrators to work more closely and ensure needs are being met. Professors observe teaching through web cameras and score teacher candidates on a competency-based rubric to make adjustments to teaching in real time.

Although the program has not been around long enough to provide extensive data, both first-year teachers and administrators in the school districts that hire graduates say they are much more prepared under Tech Teach than other educator preparation programs.

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The College of Education also reaches hundreds of students throughout the state with the Tech Teach Across Texas, a district-based immersion teacher prep program that allows teacher candidates to take courses online and work in the local school districts with intensive and ongoing clinical coaching from the site coordinator, who is a district-based Texas Tech faculty member. Other professors also observe from a distance and offer immediate feedback via technology.

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CONTACT: Sarah Connell, [sarah.n.connell@ttu.edu](mailto:sarah.n.connell@ttu.edu)

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### **Texas Tech Students Participate in Summer Commencement**

Top graduates and banner bearers also are announced.

Texas Tech University will host two summer commencement ceremonies Saturday (Aug. 13) at United Supermarkets Arena (1701 Indiana Ave.), where 987 undergraduate and 620 graduate students will receive their diplomas.

“It is with great joy and satisfaction that we celebrate another class of Red Raiders who are realizing the culmination of a dream,” Texas Tech President Lawrence Schovanec said. “Our graduates have shown their commitment to education through hard work, perseverance and dedication. We are proud of their efforts and achievements and look forward to their future contributions to society.”

The ceremony for the [Rawls College of Business](#), the [Edward E. Whitacre Jr. College of Engineering](#), the [College of Human Sciences](#), University Programs, the [College of Visual & Performing Arts](#), [Wind Energy](#) and the [Graduate School](#) (doctoral and master’s candidates for the colleges listed) begins at 9 a.m.

The ceremony for the colleges of [Agricultural Sciences & Natural Resources](#), [Architecture](#), [Arts & Sciences](#), [Education](#), [Media & Communication](#) and the Graduate School (doctoral and master’s students for the colleges listed) begins at 1:30 p.m.

Texas Tech alumnus Andres Alcantar, chairman for the Texas Workforce Commission, and public administrator, will speak at both ceremonies.

Commencement ceremonies can be viewed live online [here](#).

### **About the speaker**

Andres Alcantar graduated with his bachelor’s and master’s degrees in public administration from Texas Tech to begin his career in public service. His experience includes directing the Texas Health and Human Services Commission, serving as an adviser to former Gov. George W. Bush and serving as deputy director of the Governor’s Budget, Planning and Policy Division. As chairman of Texas Workforce Commission, he represents the public to implement customized services to meet the needs of Texas Industries and advance the development of a strong competitive workforce.

### **Honored students**

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Outstanding students, selected on all-around achievement, will carry banners representing their respective colleges. The banner bearers are:

- College of Agricultural Sciences and Natural Resources: Jenna Judith Hay, agricultural communications
- College of Architecture: Karla V. Perez, architecture
- College of Arts & Sciences: Sarah Elizabeth Dickerson, history
- College of Education: Sarahie Otila Garza, elementary education
- College of Human Sciences: Rachel Louise Ruhman, apparel design and manufacturing
- College of Media & Communication: Mathew Scott Sirgo, media strategies
- College of Visual & Performing Arts: Madeline Grace Joiner, art
- Graduate School: 9 a.m. ceremony; Adrian Darnell Barnes, doctoral candidate in philosophy, fine arts; 1:30 p.m. ceremony; Nathian Shae Rodriguez, doctoral candidate in philosophy, mass communications
- Honors College: 9 a.m. ceremony; Brooke McCall Downing, accounting; 1:30 p.m. ceremony; Alexandria Jane Fletcher, biochemistry
- Rawls College of Business: Daniel Martinez, marketing & management
- University Programs: Crista Pearl Birney, university studies
- Whitacre College of Engineering: Farida Elvire Yeye, civil engineering

The highest-ranking summer graduates for each college are:

- College of Agricultural Sciences & Natural Resources: Jenna Judith Hay, agricultural communications
- College of Architecture: Karla V. Perez, architecture
- College of Arts & Sciences: Casey Allen Brito, mathematics; Emily Ann Sterile, psychology
- College of Education: Heather Nichole Alegria, Heather Nicole Anthony, Cynthia Capetillo, Margaret Elise Cuevas, Jessica Daly, Maria de Jesus Eguiluz, Lauren Epperly, Marjorie Cubillos Garay, Macarena J. Garcia, Sarahie Otila Garza, Haley Ann Halvas, Bobbie Jean Jackson, Clare Nichole Jakubowski, Kailey Marie Kotara, Andrea Anne M. Malaluan, Susy Medina, Chelsea Elizabeth Nettles, VyVy T. Nguyen, Philip Daniel Olivetti, Karina Palacio, Norma Annie Pardee, Adrienne Kristina Durieux Pineda, Katherine Gale Rollins, Kellie Anne Sanders, Ana Isabel Segura, Megan Christine Seymour, Elizabeth Dianne Shirey, Devinne Nicole Tribble, Carolina Ugalde, Maria Vilagomez, Cristy Lynn Wilke, Michelle Elizabeth Wolther. All will graduate with a bachelor's in multidisciplinary studies with different areas of specialization.
- College of Human Sciences: Laura Diane Balo, human development; Rachel Louise Ruhman, apparel design and manufacturing; Amanda Carolann Sparks, human development; Morgan Krystyne Vaughn, retail management
- College of Media & Communication: Matthew Scott Sirgo, media strategies
- College of Visual & Performing Arts: Madeline Grace Joiner, art
- Rawls College of Business: Brooke McCall Downing, accounting
- University Programs: Kyndal Jacobs, university studies
- Whitacre College of Engineering: Farida Elvire Yeye, civil engineering





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- Wind Energy: Austin Edward Fincher

For more information about commencement, including maps, parking and commendations visit the [commencement website](#).

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**CONTACT: Amiee Dixon, commencement coordinator, provost and senior vice president for academic affairs, Texas Tech University, (806) 834-8309 or [amiee.dixon@ttu.edu](mailto:amiee.dixon@ttu.edu)**



TEXAS TECH UNIVERSITY

# Advisory

## FOR IMMEDIATE RELEASE

DATE: Aug. 10, 2016

CONTACT: Glenys Young, [glenys.young@ttu.edu](mailto:glenys.young@ttu.edu)  
(806) 742-2136

**MEDIA:** Information below is embargoed until 9:45 a.m. Thursday (Aug. 11).

### **Texas Tech to Announce Creation of Campus in Costa Rica**

The international campus will cater to students in Central America.

**WHAT:** Texas Tech University will host a special signing ceremony and news conference to announce the establishment of Texas Tech University Costa Rica, the university's first international campus. This campus will offer students in that region the opportunity to attain a Texas Tech degree offered completely through the campus in San José.

Texas Tech President Lawrence Schovanec and John Keith, director of Promerica Group, will sign official documentation and speak to members of the media about the university's newest campus.

Photograph and interview opportunities will be available.

**WHEN:** 9:45 a.m. Thursday (Aug. 11), prior to the Board of Regents meeting

**WHERE:** Red Raider Lounge in the Red Raider Ballroom, Student Union Building

**MORE:** Upon approval of the Southern Association of Colleges and Schools' Commission on Colleges, the campus in San José, Costa Rica, will offer students in Central America an opportunity to earn credits necessary for undergraduate or graduate degrees. With instruction in English, programs will be offered by the [Rawls College of Business](#), the [Edward E. Whitacre Jr. College of Engineering](#), the [College of Arts & Sciences](#) and the [Department of Hospitality and Retail Management](#) within the [College of Human Sciences](#).

Texas Tech University Costa Rica will be completely self-sustaining and self-supported through revenue generated by student enrollment and revenues collected from Promerica Group, a highly reputable multinational conglomerate of companies operating throughout Central and Latin America.

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

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(806) 742-2136

### **Section of Indiana Avenue Closed During Commencement Ceremonies on Saturday** Between Main and 18<sup>th</sup> streets will be closed from 7 a.m. to 5 p.m.

**WHAT:** A portion of Indiana Avenue will be closed to through traffic during the Texas Tech University commencement ceremonies.

**WHEN:** 7 a.m. to 5 p.m. Saturday (Aug. 13)

**WHERE:** Indiana Avenue between Main and 18<sup>th</sup> streets

**DETAILS:** For ADA-accessible parking:

- If entering campus from Flint Avenue and 19<sup>th</sup> Street, turn left on 18th Street toward ADA-accessible parking in the lot adjacent to the Law School and immediately across from the United Supermarkets Arena.
- If entering campus from Hartford Avenue and 19th Street, turn left on 18th Street toward ADA-accessible parking in the lot adjacent to the Law School and immediately across from the United Supermarkets Arena.
- If entering campus from Indiana Avenue and 19th Street, turn right on Indiana (once on campus) and then right on 18th Street toward ADA-accessible parking in the lot adjacent to the Law School and immediately across from the United Supermarkets Arena.
- If entering campus from the Marsha Sharp Freeway and Flint Avenue, turn south on Flint Avenue, then make a right on Main Street toward ADA-accessible parking in the lot immediately west of the United Supermarkets Arena.

For graduates and guest parking:

- If entering campus from Flint Avenue and 19th Street, turn left on 18th Street toward available parking in the lot adjacent to the Law School and immediately across from the United Supermarkets Arena.
- If entering campus from Hartford Avenue and 19th Street, turn right or left directly into the lots adjacent to the Law School and immediately across from the United Supermarkets Arena.
- If entering campus from Indiana Avenue and 19th Street, turn right on Indiana (once on campus) and then right on 18th Street toward the lots adjacent to the Law School and immediately across from the United

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Supermarkets Arena, or continue straight from Indiana Avenue onto Texas Tech Parkway toward the large available lots immediately to the north and south of the parkway.

- If entering campus from the Marsha Sharp Freeway and Flint Avenue, turn south on Flint Avenue, then right on 18th Street toward available parking in the lot adjacent to the Law School and immediately across from the United Supermarkets Arena.

For faculty and staff parking:

- Faculty and staff parking will remain in the lot immediately north of the United Supermarkets Arena. To access that lot, use Flint Avenue, then turn west onto Main Street.

All graduates and guests may also park in any of the dormitory lots, marked as such by signage posted at those lots.

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CONTACT: Glenys Young, [glenys.young@ttu.edu](mailto:glenys.young@ttu.edu)  
(806) 742-2136

### **Texas Tech University Establishes Campus in Costa Rica**

The university's first international campus extends its global reach and engagement.

Texas Tech University officials announced today the start of an exciting new chapter in the university's growth: an expanded global presence in the form of its new international campus, Texas Tech University Costa Rica.

Upon approval of the Southern Association of Colleges and Schools' Commission on Colleges, the new campus in San José, Costa Rica, will offer students in Central America an opportunity to earn credits necessary for undergraduate or graduate degrees. With instruction in English, programs will be offered by the [Rawls College of Business](#), the [Edward E. Whitacre Jr. College of Engineering](#), the [College of Arts & Sciences](#) and the [Department of Hospitality and Retail Management](#) within the [College of Human Sciences](#).

"This collaboration with our partners in Costa Rica will increase access to a Texas Tech education for students in Costa Rica and Central America. This project also supports the internationalization efforts at Texas Tech and advances our reputation and competitive position by preparing our graduates to live and work in different cultures," Texas Tech President Lawrence Schovanec said. "Beyond the educational programs offered at Texas Tech University Costa Rica, there will be opportunities for our students and faculty to engage in international partnership and internships, research and study abroad."

Texas Tech University Costa Rica will be completely self-sustaining and self-supported through revenue generated by student enrollment and revenues collected from Promerica Group, a highly reputable multinational conglomerate of companies operating throughout Central and Latin America.

"In Promerica, we believe the future of Costa Rica and Central America requires vision, leadership and 21st century skills in order to take our region to the next level," said John Keith, director of Promerica Group. "The Texas Tech campus in Costa Rica will be a catalyst for progress, development and innovation. U.S. higher education engaging in Latin America can have a significant impact on the future growth of our emerging economies. We see Texas Tech as a leader in this regard and we are proud to be their partner."

Initial program offerings include:

- B.S. Electrical Engineering
- B.S. Industrial Engineering

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- B.S. Computer Science
- B.S. Mathematics
- Dual B.S. in Computer Science and Mathematics
- B.S. Restaurant, Hotel and Institutional Management
- Undergraduate certificate in Restaurant, Hotel and Institutional Management
- Graduate certificate in Essentials of Business

The Texas Tech University center in Seville, Spain, facilitates Texas Tech students to study abroad, but Texas Tech University Costa Rica will be the university's first degree-awarding international campus primarily serving students in that region.

In the last decade, international engagement increasingly has been a focus of Texas Tech. The university's mission statement, adopted by the Board of Regents in May 2010, states: "The university is dedicated to student success by preparing learners to be ethical leaders for a diverse and globally competitive workforce. The university is committed to enhancing the cultural and economic development of the state, nation and world." Texas Tech's five-year [Quality Enhancement Plan](#) also focuses on international engagement with the theme "Bear Our Banners Far and Wide: Communicating in a Global Society."

"Our flagship institution was founded with a vision of thinking on worldwide terms, and this endeavor strengthens Texas Tech's mission of preparing global leaders and enriching cultures around the world," said Texas Tech University System Chancellor Robert Duncan. "I congratulate and thank Dr. Schovanec and his team as well as our partners in Costa Rica for making possible this exciting expansion that will raise our international profile and increase opportunities for our students, faculty and higher education in a great country."

The decision to place Texas Tech's newest satellite campus in Costa Rica was not arbitrary. The country's strategic location allows it to be a gateway to the rest of Latin America, yet still be easily reached from Texas. As the oldest democracy in the region, Costa Rica shares a cultural affinity with the United States as well as a tradition of stability. And it has a bright future ahead; more than 250 high-tech multinational companies already operate there, and its educational system is one of the best in Latin America.

"In a global community, the internationalization of U.S. higher education across borders is the new frontier. Texas Tech's global outreach, starting in Costa Rica, has the potential to make a difference and be a game changer in Central America and beyond," said Jack J. Bimrose, director of EDULINK, a subsidiary of Promerica Group. "University education in the United States is valued and admired worldwide, and we believe it has the unique power to change the lives and futures of students, families, communities, nations and the world. Our group chose Texas Tech as our academic partner on the basis of its high quality programs, outstanding reputation, commitment to international engagement and visionary leadership."

Texas Tech University Costa Rica plans to open for Spring 2018.



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TEXAS TECH UNIVERSITY SYSTEM

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 12, 2016

### CONTACTS:

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**Norton Baker**, president of the J.T. & Margaret Talkington Charitable  
Foundation board of directors, (806) 792-1014

**MEDIA:** Chancellor Robert Duncan will be available today for interviews in his office at 1:45 p.m.

## Texas Tech Receives \$10 Million Gift from Talkington Foundation

Officials from the [Texas Tech University System](#) and the [J.T. & Margaret Talkington Charitable Foundation](#) today (Aug. 12) announced a \$10 million gift to [Texas Tech University](#).

The gift will support academic and research advancements in the [College of Visual & Performing Arts](#) and bolster ongoing efforts to enhance the arts.

Chancellor [Robert Duncan](#) shared the news during a meeting of the [Board of Regents](#), noting the Talkingtons' meaningful history of philanthropic support to the Texas Tech University System.

"The generosity of J.T. and Margaret knows no bounds," Duncan said. "Words cannot express how grateful we are for this incredible gift, which is in many ways the capstone of their longstanding commitment to supporting the arts at Texas Tech. Great universities are inspired and enhanced by the arts, and the arts continue to thrive at Texas Tech because of the Talkingtons' sustained philanthropy."

Addressing immediate needs, the gift will provide critical funding for the expansion and renovation of research and academic facilities at the [Charles E. Maedgen Jr. Theatre](#). The project will transform teaching, research and performance spaces, increase the building's footprint and bring together faculty and students in one location for added interdisciplinary opportunities.

The gift also will be eligible for matching funds and incentives, strengthening its impact on the college, university and the Lubbock arts community.

"Two of J.T. and Margaret's strongest passions were the arts and Texas Tech," said Norton Baker, president of the J.T. & Margaret Talkington Charitable Foundation board of directors. "Both are immensely connected and play a significant role in making this

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community an extraordinary place to live and work. We are proud to share this gift that will honor the Talkingtons' legacy and have a lasting impact on Texas Tech and Lubbock."

A mainstay for the College of Visual & Performing Arts, the Maedgen Theatre building supports many forms of the arts and is integral to the overall learning environment. In addition to hosting more than a dozen productions a year, students and faculty throughout the college use the facility to learn, discover and hone their skills.

The Maedgen Theatre building also serves as a cultural gateway for the arts and the Lubbock community, holding performances and offering outreach programs for more than 7,000 patrons each year.

"The College of Visual & Performing Arts has made significant contributions to the arts community in Lubbock, across the South Plains and the world, thanks to many talented and dedicated faculty, staff and students, and supporters like the Talkingtons," Texas Tech President [Lawrence Schovanec](#) said. "This talent carries the reputation from Texas Tech from local to international venues. We are grateful for this generous gift and investment in our university's future."

Formed in 2002, the College of Visual & Performing Arts supports the rich history of the arts in West Texas and the nation through its [School of Art](#), [School of Music](#) and [School of Theatre & Dance](#). Educating more than 1,100 students annually, the college is home to industry-leading faculty, and it graduates internationally renowned artists, performers and teachers. Texas Tech is the only public university in the state with accreditation in all four of its programs in visual art, dance, music and theatre.

"This support from the J.T. & Margaret Talkington Charitable Foundation marks a historic milestone for the Texas Tech University College of Visual & Performing Arts," said Interim Dean Andrew Martin. "It is an affirmation of the importance of the arts to a top research university and the communities we serve."

"This gift recognizes the impressive professional accomplishments in art, music, theatre and dance of our students, faculty and alumni," added Noel Zahler, who will begin as dean of the college this fall semester. "It underscores the importance of the arts to Lubbock. The gift is a tribute to the legacy of its founders and represents the future of the college. We are profoundly grateful for the immeasurable benefit it provides."

The J.T. & Margaret Talkington Charitable Foundation was established in 1997 to honor the history of the couple's philanthropy and dedication to the city of Lubbock. Through their foundation and personal giving, the Talkingtons have supported multiple initiatives throughout the Texas Tech University System.



TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 14, 2016

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### **University Libraries and TTU Press Launch Interdisciplinary Online Journal**

The open-access journal, titled “Archivation Exploration,” will focus on rotating themes as well as the happenings of each year’s Sowell Collection Conference.

[Texas Tech University Libraries](#) and [Texas Tech Press](#) recently launched the inaugural issue of the online journal “[Archivation Exploration](#),” an interdisciplinary, peer-reviewed, open-access journal to be published twice a year.

The first issue of the journal, which was released in April, features presentations from the 2015 Sowell Collection Conference. According to Diane Warner, editor of “Archivation Exploration,” this conference regularly features Texas Tech students and alumni and is a great showcase for student work and research. Each April issue will feature papers, panels and creative writing presented at the previous year’s conference.

Warner said that the upcoming issue in October will feature a sports theme. The following thematic issue in October 2017 will focus on weather.

“For the upcoming issue we’re looking for scholarly articles on sports and sports history, as well as poems, stories and memoir pieces with sports as a central element,” Warner said. “Both themes are intentionally broad. Submissions using archival or special collections resource material will be given preference.”

“Archivation Exploration” encourages both scholarly and creative article submissions, which may include audio and/or visual media elements to take advantage of the journal’s digital platform. The submission deadline is Sept. 9 for the sports issue and July 26, 2017, for the weather issue. Submissions may be entered through the journal’s [website](#).

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 16, 2016

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### **Texas Tech Researchers Find Alternative for Nuclear Weapon Detection**

The researchers have demonstrated a cost-effective alternative  
for inspecting cargo containers entering U.S. ports.

A group of Texas Tech University researchers have found an innovative way to help battle terrorism.

One of the most critical issues the United States faces today is preventing terrorists from smuggling nuclear weapons into its ports. To this end, the U.S. Security and Accountability for Every Port Act mandates all overseas cargo containers be scanned for possible nuclear materials or weapons.

Detecting neutron signals is an effective method to identify nuclear weapons and special nuclear materials. Helium-3 gas is used within detectors deployed in ports for this purpose.

The catch? While helium-3 gas works well for neutron detection, it's extremely rare on Earth. Intense demand for helium-3 gas detectors has nearly depleted the supply, most of which was generated during the period of nuclear weapons production of the past 50 years. It isn't easy to reproduce, and the scarcity of helium-3 gas has caused its cost to skyrocket – making it impossible to deploy enough neutron detectors to fulfill the requirement to scan all incoming overseas cargo containers.

Helium-4 is a more abundant form of helium gas, which is much less expensive, but can't be used for neutron detection because it doesn't interact with neutrons.

A group of Texas Tech researchers, led by Horn professors Hongxing Jiang and Jingyu Lin, [report](#) this week in Applied Physics Letters that they have developed an alternative material – hexagonal boron nitride semiconductors – for neutron detection. This material fulfills many key requirements for helium gas detector replacements and can serve as a low-cost alternative in the future.

The group's concept was first proposed to the [Department of Homeland Security's Domestic Nuclear Detection Office](#) and received funding from its Academic Research Initiative program six years ago.

By using a 43-micron-thick hexagonal boron-10 enriched nitride layer, the group created a thermal neutron detector with 51.4 percent detection efficiency, which is a record high for semiconductor thermal neutron detectors.

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“Higher detection efficiency is anticipated by further increasing the material thickness and improving materials quality,” explained Jiang, a Horn professor, the Edward E. Whitacre Jr. Chair in [Electrical & Computer Engineering](#) and a co-director of the [Texas Tech Nanophotonics Center](#).

“Our approach of using hexagonal boron nitride semiconductors for neutron detection centers on the fact that its boron-10 isotope has a very large interaction probability with thermal neutrons,” Jiang continued. “This makes it possible to create high-efficiency neutron detectors with relatively thin hexagonal boron nitride layers. And the very large energy bandgap of this semiconductor – 6.5 eV – gives these detectors inherently low leakage current densities.”

The key significance of the group’s work? This is a completely new material and technology that offers many advantages.

“Compared to helium gas detectors, boron nitride technology improves the performance of neutron detectors in terms of efficiency, sensitivity, ruggedness, versatile form factor, compactness, lightweight, no pressurization ... and it’s inexpensive,” Jiang said.

This means the material has the potential to revolutionize neutron detector technologies.

“Beyond special nuclear materials and weapons detection, solid-state neutron detectors also have medical, health, military, environment and industrial applications,” he added. “The material also has applications in deep ultraviolet photonics and two-dimensional heterostructures. With the successful demonstration of high-efficiency neutron detectors, we expect it to perform well for other future applications.”

The main innovation behind this new type of neutron detector was developing hexagonal boron nitride with epitaxial layers of sufficient thickness – which previously didn’t exist.

“It took our group six years to find ways to produce this new material with a sufficient thickness and crystalline quality for neutron detection,” Jiang noted.

Based on their experience working with III-nitride wide bandgap semiconductors, the group knew at the outset that producing a material with high crystalline quality would be difficult.

“It’s surprising to us that the detector performs so well, despite the fact there’s still a little room for improvement in terms of material quality,” he said.

One of the most important impacts of the group’s work is “this new material and its potential should begin to be recognized by the semiconductor materials and radiation detection communities,” Jiang added.



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Now that the group has solved the problem of producing hexagonal boron nitride with sufficient thickness, as well as crystalline quality to enable the demonstration of neutron detectors with high efficiency, the next step is to demonstrate high-sensitivity of large-size detectors.

“These devices must be capable of detecting nuclear weapons from distances tens of meters away, which requires large-size detectors,” Jiang added. “There are technical challenges to overcome, but we’re working toward this goal.”

### **About the journal**

Applied Physics Letters features concise, rapid reports on significant new findings in applied physics. The journal covers new experimental and theoretical research on applications of physics phenomena related to all branches of science, engineering, and modern technology. Find more information on its [website](#).

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 19, 2016

CONTACT: Kimberly Gramm, [kimberly.gramm@ttu.edu](mailto:kimberly.gramm@ttu.edu)  
(806) 834-7283

### **Innovation Hub Launching New Programs for Entrepreneurs**

Texas Tech's facility is a place for ideas to grow.

Texas Tech University is calling on all aspiring entrepreneurs looking for help to take great ideas to the market.

Kimberly Gramm, recently hired as managing director for the [Innovation Hub at Research Park](#), is unveiling new programs to empower the next generation of innovators and entrepreneurs to launch successful startups. Programs for students, faculty and the community run throughout the year to offer mentoring, funding opportunities and space in the 40,000-square-foot state-of-the-art facility.

Of the 16 programs, 11 are dedicated to students and community entrepreneurs. The remaining five capitalize on faculty expertise to offer something for everyone.

"LEDA is proud to support these programs," said John Osborne, CEO of the Lubbock Economic Development Alliance (LEDA). "They can help ensure our community is receiving the education, early-stage funding and mentoring our businesses need to develop."

The first program to launch is the Red Raider Idea Competition, sponsored by the [Texas Tech Alumni Association](#).

"It's a fun, 'American Idol'™-meets-elevator pitch competition creating excitement in our community to vote for our entrepreneurs with the next big idea," Gramm said.

The pitch with the most votes has a chance to win \$2,000. Competitors are asked to create a 60-second video elevator pitch and upload it to the Innovation Hub [website](#) for voting. The Texas Tech community will then vote on its favorite idea. The competition begins Saturday (Aug. 20). More details are located on the website.

A cornerstone of successful startup programs is the mentoring and advice given by seasoned entrepreneurs. The Innovation Hub is accepting applications for mentors with expertise in technology startups. A team-based approach to mentoring is a best practice. The Innovation Hub models the program after the Massachusetts Institute of Technology's Venture Mentoring System. Gramm and Jack Richards, the Innovation Hub's director of mentors, are recruiting 50 mentors to help local startups in their journey.

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Supporting and launching successful startups is the mission of the Innovation Hub. Gramm said she is proud to have leadership organizations such as the Lubbock Chamber of Commerce, the Texas Tech Alumni Association and the Lubbock Economic Development Alliance passionately involved in developing significant resources for entrepreneurs. Together the Innovation Hub and its supporters are working closely with [Texas Tech University System](#) leaders to develop a robust entrepreneur ecosystem to positively impact the West Texas economy.

For more information on programs at the Innovation Hub, visit its [website](#).

People are encouraged to use the hashtag #TTUInnovationHub when sharing on social media.

### **About Texas Tech University**

Texas Tech University, founded in 1923, officially opened its doors in 1925 as a public research university. Today, the university serves more than 35,000 undergraduate and graduate students. Texas Tech's world-class teaching and research faculty serves students through 10 colleges: the [College of Agricultural Sciences and Natural Resources](#), the [College of Architecture](#), the [College of Arts & Sciences](#), the [Rawls College of Business](#), the [College of Education](#), the [Edward E. Whitacre Jr. College of Engineering](#), the [Honors College](#), the [College of Human Sciences](#), the [College of Media and Communication](#) and the [College of Visual and Performing Arts](#).

Texas Tech is designated as a Carnegie Tier One university by the Carnegie Classification of Institutions of Higher Education. The university is placing special focus on advancing knowledge through innovative and creative teaching as well as research and scholarship which provide opportunities for faculty and students to strengthen Texas Tech's existing commitments in enhancing the cultural and economic development of the state. For more information, visit its [website](#).

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# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 24, 2016

CONTACT: George Watson, [george.watson@ttu.edu](mailto:george.watson@ttu.edu)  
(806) 742-2136

### **Researcher Receives Grant to Study Needle-Free Injection Hydrodynamics**

The grant comes from Inovio Pharmaceuticals to study the various fluid dynamics of medications administered through needle-free devices.

The human propensity to avoid a doctor's office over one of any number of fears is neither old nor uncommon.

One of the more popular reasons people avoid the doctor is a fear of needles. In fact, roughly one in five people, or 20 percent, either refuse or put off seeking medical attention due to needle phobia, which is a broad term covering six different types of fears, from a fear of sharp, pointed objects to a fear of vaccines and vaccinations.

That fear, plus the safety of doctors from accidental punctures from needles in the course of administering medication, has led to the push toward needle-free injections, which uses a device to deliver miniscule jet streams of medications at high rates of speed that puncture the skin. A Texas Tech University researcher has teamed up with a prominent pharmaceutical company to study the hydrodynamics of needle-free injectors to look both at their properties and ways to improve their effectiveness.

Jeremy Marston, a professor in the [Department of Chemical Engineering](#) in the [Whitacre College of Engineering](#), received a \$235,794 grant from [Inovio Pharmaceuticals](#) to study how needle-free injection devices work, how certain fluids work in those devices and what improvements can be made.

"Basically, we want to understand a little bit more about the actual mechanics of the jets," Marston said. "What we've noticed is there is a little bit of a spread when it hits the skin, which is undesirable, so now we're trying to think about how to eliminate that and have a nice streamline jet going straight into the skin."

### **Piercing without injecting**

It's hard for the average person – though they may be one of the 20 percent happy to go needle-free – to visualize medication getting under the skin without the skin being punctured.

In fact, it's hard to see at all since the process happens so quickly and at such a miniscule scale. Marston said the normal needle-free injection stream is only about 100 microns in diameter, or about the thickness of a human hair. It also travels at about 200 meters, or 600 feet, per second.

Medication in a cartridge is loaded into a syringe-like device that is pressed against the skin and then activated using either compressed gas or a spring which applies pressure to the plunger, forcing it down and forcing the liquid out at very high speeds. Using this method, medication can be tailored for a specific area under the skin, and the diameter of the stream of medication determines its final deposition depth under the skin.

Marston's study, however, will deal more with the momentum needed to get the medication jet to puncture the skin, and then how fluids of various viscosity work both with the device he developed in his lab – which was part of a previous study he performed for Bioject Medical Technologies, purchased by Inovio in March – and with devices developed by Bioject and Inovio.

“They want to understand more about how the devices are working,” Marston said. “When Inovio purchased Bioject and all its assets a few months ago they found in their archives the work I'd done for them. They also wanted to know a little bit more about the fluid dynamics aspect of the devices. That's how the introduction began.”

### **Push toward needle-free**

It's not just alleviating a patient's fear of needles that makes needle-free injections more desirable.

Marston said the World Health Organization (WHO) is making a concerted effort toward making the global medical community needle-free to reduce the risk of cross-contamination of doctors who are accidentally punctured by needles. There are instances, Marston said, where needles are very difficult to replace, particularly with the administration of large doses of medication. Needle-free injections are more useful with small doses, most frequently with the injection of insulin.

Marston's study also could help improve injection of certain types of fluids. He said fluids with different properties are more difficult to inject with a needle and syringe. Plus, needle-free injection has been shown through clinical trials to have better release response times, allowing for a longer, more gradual release of the drug into the patient's body.

“So, actually, needle-free injection disperses better than regular injection when you just deposit a single blob through a needle and syringe,” Marston said. “It disperses better and is absorbed slightly more slowly, so it may be preferred by some patients.”

Using the technology in his laboratory at Texas Tech, Marston will test fluids of various viscosities to see which ones react better in a needle-free injector. Some will be low viscosity, like water, while others will be high viscosity, like glycerin or honey.



Marston will use a high-speed camera to view how the various fluids react when injected at high rates of speed, which ones penetrate the skin better and more completely and which ones disperse easily.

“There are a few components to study,” Marston said. “There are a couple of really specific applications the company has, so those will be dictated more by the company. On the other hand, we want to do quite a broad, fundamental study so we can look at how these things perform on a whole range of fluid properties.”

Marston’s devices in his lab also could undergo some modifications. The laser he uses to create the small jet streams comes from a large, \$20,000 device that is not indicative of the small, hand-held devices needed to go through clinical trials. He has some modifications in mind to scale down to the size of a hand-held device.

Marston will hire a post-doctoral research associate to conduct the research with the various needle-free injection models to determine their range of applicability, then will attempt to build mathematical models and run simulations to develop more predictive capabilities that will guide future development of needle-free injection devices.

“Hopefully it leads to an understanding and we start thinking about how to make these devices more efficient and possibly even more cost-effective as well.”

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 25, 2016

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(806) 742-2136

### **Finance Graduate Student Honored with Scholarship to Attend Community Banking Conference**

Raymond Kim's attendance will further his research  
and essay for macro-finance and banking.

Raymond Kim, a graduate student in finance in the Texas Tech University's [Rawls College of Business](#) will be honored as an emerging scholar at the Community Banking and Policy Conference Sept. 28 in St. Louis.

The conference will award the emerging scholars with a scholarship to attend their conference at St. Louis Federal Reserve Bank. Kim plans to use the scholarship as a way to further his research as a doctoral candidate in finance at the Rawls College of Business.

By attending and participating in research presentations at the conference, Kim hopes to fulfill gaps of knowledge he said he lacks and surround himself with established Federal Reserve economists and community banking executives. At the conference, Kim will hear from different perspectives between practitioners, academics, and bank regulators to see where his research can help in an idealistic way.

"Community banking conferences are especially important because academics and regulators want to prevent another financial crisis from happening again," Kim said. "It would not be possible to do important research in this field without going to conferences such as this particular one."

His research interest is focused on macro-finance and banking, which allows him to explore the traditional benefits of community banking. For example, Kim said, is that community banks rely more on relationship lending than larger Wall Street banks. Smaller local banks usually have a closer relationship with people who borrow money. This tends to give the bank more insight on what the borrower can do and how their business is functioning. This is especially important in local industries such as farming and small businesses.

"Ever since investment banks and commercial banks merged in 1999, banking changed in many ways," Kim said. "I remember my dad often relied on relationship banking to export American construction machinery, some coincidentally made here in Lubbock, to overseas markets."

Through his research, he has written a paper called, “Too Big to Lend? The “Invisible Hand” in Banking” It was honored as best paper in financial institutions award and is a semifinalist at the Financial Management Association Conference, which has more than 1,700 submissions from academics and is rarely given to solo authors. He plans to refine his paper after attending the community banking conference with the new knowledge he will receive.

Prior to Texas Tech, Kim worked on Wall Street for almost 10 years. Over time he realized there were structural problems within the financial markets. He also found that Wall Street firms were not incentivized to fix these problems, but only accepted and anticipated them. He decided to transfer to Texas Tech to pursue academia and research solutions to the problems at hand.

As Kim’s adviser, [Scott Hein](#), faculty director and professor in the Rawls College of Business, introduced him to the conference in hopes it would provide a good opportunity for his research.

“Raymond is most deserving of this selection as he has already begun to establish a serious initiative to better understand our banking system and especially the role that a community bank plays in the overall economy, and how their business model is really different than their more commonly known large bank brethren,” Hein said.

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 29, 2016

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### **Rawls College of Business Creates Supply Chain Management Major**

The new major will be offered under the Area of Marketing and Supply Chain Management.

In a global economy, getting goods and services to the right places at the right times is critical to business success. Managing supply and demand is an integral part of business success.

The world is increasingly seeking experts in logistics, inventory management, distribution and customer service, among other areas. The demand for experts who can fill these roles is only expected to increase in the coming years, and Texas Tech University has taken steps to produce graduates ready to fill those roles.

The Area of Marketing and Supply Chain Management within the [Rawls College of Business](#) has created a major that will offer a bachelor's degree in supply chain management, which ensures the flow of goods, services, finances and information from the point of origin to the point of consumption along global supply chains. Formerly a concentration, or minor, under the marketing umbrella, the new major will be offered beginning with the upcoming semester.

"There is tremendous demand in industry for supply chain management expertise," said Rodney Thomas, the area coordinator of Marketing and Supply Chain Management. "Getting the right products to the right place at the right time is a timeless and essential need for every nation in the world. Although our students were doing very well with the supply chain management concentration, we wanted to give them even more in-depth training in core supply chain functions and broaden their career opportunities.

In Thomas' proposal for the new major, he cited statistics from the United States Department of Labor's Occupational Outlook Handbook that suggests the supply chain management job outlook for 2021-22 is expected to increase 22 percent with an additional 27,600 jobs.

Since 2000, the proposal said, logistics costs in the U.S. ranged from 7.8 percent to 10.1 percent of gross domestic product while inventory costs ranged between 13.2 percent and

14.9 percent of gross domestic product, thus solidifying the need for effective supply chain managers.

“The job market is exceptional,” Thomas said. “Texas Tech supply chain management placement rates for the past few years have been nearly perfect, and average starting salaries are approaching \$55,000.”

Thomas estimates approximately 40 students will enroll in the major in the first year, and that number will grow to 100 by the fifth year. Courses in the major will range from introduction to supply chain management to marketing research, international commerce, global sourcing, business process improvement and corporate finance.

Students who pursue this major will be required to meet student learning outcomes (SLO) that demonstrate proficiency in improving supply chain processes, proficiency in the timing of ordering inventory and how much to order, proficiency in reducing transportation costs and success in employment.

Joining Thomas as instructors in the new major will be assistant professor Stephanie Thomas, who holds a doctorate in logistics and supply chain management, and Steve Rutner, a professor of practice who holds a doctorate in logistics and transportation.

Rodney Thomas said the new courses were offered in the spring and received favorable feedback from students, employers and alumni. There are plans to add a fourth faculty member in 2017 to support the undergraduate program and expand the course offering into the MBA programs.

Thomas added Texas Tech’s supply chain management major has concentrated on improving diversity in the industry. That will make its graduates even more attractive to future employers.

“At Texas Tech, we have substantially increased the number of underrepresented groups in the supply chain program over the past three years,” Thomas said. “More than 50 percent of the students in our program now come from underrepresented groups such as females and minorities, more than double the national average.”

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TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 30, 2016

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(806) 742-2136

### **Brazilians to Participate in STEM Across Continents Workshop at Texas Tech University**

The workshop will showcase the scientific collaboration between Texas Tech University and the São Paulo Research Foundation and allow for an exchange of ideas for future projects.

Faculty members from Brazilian academic institutions will join members of the Texas Tech University faculty Wednesday and Thursday (Aug. 31 – Sept. 1) for the STEM Across Continents Workshop, hosted by the [Office of International Affairs](#) (OIA).

The workshop, which will be held in the International Cultural Center's Hall of Nations, is part of Texas Tech's collaboration with the São Paulo Research Foundation (FAPESP) in Brazil. The partnership offers joint mobility funding for Texas Tech and Brazilian researchers to collaborate through a series of exchanges.

"The STEM Across Continents Workshop promises to bring scientists from Texas Tech and the state of São Paulo together to collectively develop research ideas that could be considered for funding through the FAPESP's [São Paulo Researchers International Collaboration](#) (SPRINT) program," said [Sukant Misra](#), associate vice provost for international programs. "It also will allow researchers to find common subject matter interests and develop sustainable scientific and technological collaborations."

Researchers from Brazil who are interested in participating in future collaborations with Texas Tech will deliver presentations during the workshop. Past SPRINT awardees will have an opportunity to describe their progress and challenges they faced in their projects.

In 2014 and 2015, Texas Tech and FAPESP called for proposals under the framework of the SPRINT program to promote the scientific and technological collaboration. In each round, five teams won support for exchange of faculty and postdoctoral researchers.

"The SPRINT program allows Texas Tech faculty an opportunity to forge higher education and research partnerships with scientists from the State of São Paulo," Misra said. "These collaborations are of great value to scientists as they allow them to work cooperatively to sufficiently develop novel project ideas for submission to funding agencies."

Project topics include nutritional sciences, biology, chemistry and biochemistry, human development and family studies, physics, natural resources management, biotechnology

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and genomics, environmental toxicology, mechanical engineering and chemical engineering.

[Ambassador Tibor Nagy](#), vice provost for international affairs, said the workshop is part of the OIA International Research and Development Division's continued effort to help develop multi-investigator, multidisciplinary international research and development programs at Texas Tech.

"We work with faculty to create partnership opportunities through workshops such as this and to help develop and submit large, multidisciplinary proposals to funding agencies," Nagy said. "FAPESP is one of the most visionary concepts ever developed by any government. With its focus on funding world-class research, not only in Brazil but all over the world, it highlights São Paulo's status as one of the world's most forward-looking and globally engaged regions."

The workshop will begin at 9 a.m. Wednesday with opening remarks from Texas Tech President Lawrence Schovanec and will conclude with laboratory tours from 1-4:30 p.m. Thursday.

For more information and a full itinerary, visit the [event webpage](#).

For more information about the Office of International Affairs, visit their [website](#).

**CONTACT: Reagan Ribordy, director, International Grants Administration and Partnerships, Office of International Affairs, Texas Tech University, (806) 834-2777 or [reagan.ribordy@ttu.edu](mailto:reagan.ribordy@ttu.edu)**



TEXAS TECH UNIVERSITY

# Advisory

## FOR IMMEDIATE RELEASE

DATE: Aug. 31, 2016

CONTACT: Glenys Young, [glenys.young@ttu.edu](mailto:glenys.young@ttu.edu)  
(806) 742-2136

### **‘Global Weirding,’ Katharine Hayhoe Q&A at First Friday Art Trail**

A new PBS digital series will be shown at LHUCA’s Firehouse Theatre.

**WHAT:** Free sneak preview of the new PBS digital series “Global Weirding” and question-and-answer session with Katharine Hayhoe, an internationally renowned climate scientist and director of the Texas Tech University [Climate Science Center](#)

**WHEN:** 7 p.m. and 8 p.m. Friday (Sept. 2)

**WHERE:** Louise Hopkins Underwood Center for the Arts Firehouse Theatre, 511 Ave. K

**EVENT:** A showing of the first two episodes of “Global Weirding” will be followed by a Q&A, which will be broadcast on Facebook Live to viewing parties throughout the country.

The series is a production of [Texas Tech Public Media](#) and will normally air on KTTZ-TV, with new episodes released every other Wednesday.

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

**CONTACT:** Jonathan Seaborn, production director, Texas Tech Public Television, Texas Tech University, [jonathan.seaborn@ttu.edu](mailto:jonathan.seaborn@ttu.edu)



TEXAS TECH UNIVERSITY

# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 31, 2016

CONTACT: Heidi Toth, [heidi.toth@ttu.edu](mailto:heidi.toth@ttu.edu)  
(806) 742-2136

### **Shades of Fat: Why One Leads to Obesity and Another to Hibernation**

Naima Moustaid-Moussa, an obesity researcher at Texas Tech, received an NIH grant to examine healthy brown fat and how it can be activated.

Come fall, being a bear starts to look better and better. They load up on fat, sleep the winter away and wake up hungry.

There is one key, yet little-explored difference between humans and bears that explains why hibernation doesn't work for us, and it has nothing to do with too little vacation time for an annual three-month nap. It's a difference in types of fat.

Hibernating bears, as they fill up in the autumn months, are banking brown fat – tissue full of mitochondria that burns calories and produces heat, making it more like muscle than typical fat. Humans do have some brown fat, especially as newborns, but humans accumulate mostly white fat as they age. White fat, although it produces some beneficial substances, can in excess lead to inflammation, obesity, heart disease and other related ailments.

The medical and science communities have a wealth of information about white fat and its adverse effects. They don't know as much about brown fat, how the human body produces it and what steps people can take to increase the amount of brown fat in their bodies, thus lowering their risk of heart disease, diabetes and obesity. A Texas Tech University researcher is working to fill in that knowledge gap thanks in part to a grant from the National Institutes of Health's National Center for Complementary & Integrative Health (NCCIH).

Naima Moustaid-Moussa, director of the [Obesity Research Cluster](#) and a professor in the [Department of Nutritional Sciences](#), received official notice that she won a grant from the NCCIH under award number R15AT008879. Her co-investigator in this grant is Latha Ramalingam, a research assistant professor in Moustaid-Moussa's Nutrigenomics, Inflammation & Obesity Research Laboratory. Nishan Kalupahana, a professor at the University of Peradeniya in Sri Lanka and an adjunct professor in the Department of Nutritional Sciences and doctoral candidate Mandana Pahlavani also have been actively working on this project, for which a manuscript was just accepted for publication in the Journal of Nutritional Biochemistry.

The three-year award is for more than \$430,000 to fund continued research into brown fat. Moustaid-Moussa and her team have already shown that dietary omega-3 fatty acids found

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in fish oil reduce inflammation in white fat. In this project, they will investigate mechanisms by which these omega-3 fatty acids activate brown fat in obese mice and in cultured brown fat cells from mice and human adipose stem cells.

“Dr. Moustaid-Moussa is a world-class researcher who has dedicated her career to solving some of the mysteries about obesity,” said Linda Hoover, dean of the College of Human Sciences. “In addition to her own research, Dr. Moustaid-Moussa has proven to be a very effective mentor for her graduate students. As a result, her students have received numerous national awards and recognitions. Her efforts demonstrate she truly is an integrated scholar.”

Brown fat is a relatively recent area of exploration; it is much less common in humans than white fat and for years has been difficult to detect and measure. As imaging technology advanced, the interest in brown fat and its role in preventing obesity and related diseases has increased. In her research thus far using animal models, Moustaid-Moussa has looked at ways to activate brown fat, allowing it to increase and whether there are nutritional means to convert white fat into brown fat.

This project will include feeding mice a diet that’s high in fat, some with a diet supplemented by omega-3s. Moustaid-Moussa and her team will use brown and white fat cells from those mice and stem cells from human adipose tissue to determine how brown fat cells are activated. The eventual goal, Moustaid-Moussa said, is to find dietary means as alternatives to pharmacological or medical interventions that will help people improve their human metabolic health and treat or prevent obesity and related diseases.

This content is solely the responsibility of Texas Tech and does not necessarily represent the official views of the National Institutes of Health.

### **About the Obesity Research Cluster**

In 2014, Moustaid-Moussa led a successful application to create Obesity Research Cluster. It received Tier 2 funding, which paid for postdoctoral researcher and graduate students to help with collaborations; bringing top scientists in obesity to Lubbock to talk about their research and give feedback, which would raise the university’s profile; and research seed money for teams to generate preliminary data that would help jumpstart external grant applications. Since then the members, who come from half a dozen disciplines, have worked to increase collaborations, get more studies published and raise the profile of obesity researchers at Texas Tech, which will help the cluster to grow.

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

**CONTACT: Naima Moustaid-Moussa, professor, Department of Nutritional Sciences, College of Human Sciences, Texas Tech University, (806) 834-7946 or [naima.moustaid-moussa@ttu.edu](mailto:naima.moustaid-moussa@ttu.edu)**



# News Release

## FOR IMMEDIATE RELEASE

DATE: Aug. 31, 2016

CONTACT: George Watson, [george.watson@ttu.edu](mailto:george.watson@ttu.edu)  
(806) 742-2136

### **Squeal Like a Pig BBQ Takes Raider Red Meats Championship Title**

The group won the chicken and pork categories to take top honors.

Squeal Like a Pig BBQ won two of the four categories to take Grand Champion honors at the annual [Raider Red Meats](#) Barbecue and Ribeye Championship, sponsored by the Kansas City Barbecue Society (KCBS).

Squeal Like a Pig captured first place in both chicken and pork and finished third in pork ribs en route to accumulating 700.57 points, just 16 points ahead of Reserve Champion Slap Yo' Daddy BBQ with 686.86 points. Squeal Like a Pig also finished third in pork ribs and in the top 25 in brisket.

Slap Yo' Daddy finished in the top 10 in three of the four categories, taking third in pork ribs, fifth in chicken and seventh in brisket while finishing 12<sup>th</sup> in pork.

West Texas Pitmasters took third overall, just 0.08 points behind Slap Yo' Daddy with 686.78 points, while Butcher BBQ was fourth with 686.19 points.

#### **Overall Results**

<b>Team</b>	<b>Points</b>
Squeal Like a Pig BBQ	700.5712
Slap Yo' Daddy BBQ	686.8688
West Texas Pit Masters	686.7664

#### **Chicken**

<b>Team</b>	<b>Points</b>
Squeal Like A Pig BBQ	177.1428
Juniors Up in Smoke	176.0000
Big Belly BBQ	174.8572

#### **Pork Ribs**

<b>Team</b>	<b>Points</b>
Old 99 Meat Company	177.1544
Smoke Em Up BBQ	177.1428
Squeal Like A Pig BBQ	175.4400

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**Pork**

<b>Team</b>	<b>Points</b>
Squeal Like a Pig BBQ	179.4400
Kiss My Rack Squared	176.5828
West Texas Pit Masters	176.5600

**Brisket**

<b>Team</b>	<b>Photo</b>
Bent Nail BBQ	180.0000
Can't Smoke This	176.5828
Butcher BBQ	176.5600

For complete results, visit the KCBS [website](#).

Find Texas Tech news, experts and story ideas at [Texas Tech Today Media Resources](#) or follow us on [Twitter](#).

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# Web Only

## **‘Alone in the Middle of 30,000 People’ No More**

Project CASE provides support, advising and avenues to success for students with autism.

By Heidi Toth

DeAnn Lechtenberger will never forget a phone call she received more than a decade ago. It was about 40 degrees outside and sleeting, and the Texas Tech University student on the other end needed a favor. He had cerebral palsy, used a walker and needed a signature from an administrator on campus.

“He called and said, ‘would you please look up when the office closes? I’m afraid I’m not going to get there on time,’” he told her.

Lechtenberger, a professor of special education, looked up the office hours, and told the student he had until 5 p.m. Be careful out there, she added.

“I’ve got a list of things I’ve got to get signed off,” the student told her. “He was listing all these people he had to get signatures from the week it’s sleeting and cold outside.”

After the phone call Lechtenberger kept thinking about this situation. The student got grant money to pay for housing and scholarships to pay for tutoring, all from different organizations. He couldn’t drive, so he either walked or made arrangements with Citibus. She asked him later if he’d ever had a meeting where all the people he needed to sign his paperwork attended and passed the papers around instead of him walking all over campus.

The next time around she set up that meeting with the help of [Student Disability Services](#). It worked. In addition to getting the paperwork completed, the different agencies got a better idea of what the student needed and how his needs could be met.

Lechtenberger remembered this student as she was preparing a grant proposal for the Texas Council on Developmental Disabilities. Her idea was to create a program that would provide college students with autism spectrum disorder (ASD) and other developmental disabilities with a support group. A number of students with ASD attend college, but many drop out soon after – not for lack of academic ability, but because they never find a way to overcome organizational and relationship difficulties brought on by autism.

That program, in its fifth year at Texas Tech, is known as [Project CASE](#) and helps dozens of students succeed in college. It was highlighted this month on [Friendship Circle, a special needs resource](#), as one of 10 collegiate programs in the nation to offer services to college students with autism spectrum disorder.

“The first year of the program one student called me from across campus and said, ‘Can I please come in and talk to you? I’m alone in the middle of 30,000 people,’” Lechtenberger

said. “That just really kind of sums it up. Our students want to connect with other students and feel like they’re part of the Red Raider family.”

### **How Project CASE works**

Project CASE, which stands for Connections for Academic Success and Employment, is supplementary support for students with developmental disabilities. The program is housed in the [Burkhart Center for Autism Education & Research](#), and most of the students have autism spectrum disorder. But a few have other developmental disorders.

Students who are accepted to Texas Tech and qualify for help from the Office of Student Disability Services can then apply to Project CASE if they need more support. They are working toward a degree, which sets CASE apart; other programs in the state help students get certificates or take classes, but rarely earn full degrees and get jobs. Texas Tech partners with South Plains College as well for students who want to start at a community college or who want to earn an associate’s degree or a technical certificate.

CASE isn’t about tutoring, providing academic help or advocating for these students. Lechtenberger and her team are teaching students to become advocates for themselves.

“It really is about helping them find their voice and using that voice to create the life they want for themselves,” she said.

Each student is assigned to a learning specialist, all of whom are trained in special education. The specialist meets with each student weekly, helping with organization and time management, going over class syllabi, asking about roommates and other relationships and checking in with them about their week.

Once a month they have a bigger meeting known as a wraparound meeting. Students choose who they want on their teams: an academic adviser or tutor, representatives from Student Disability Services, their learning specialist or even faculty members, personnel from community service providers or an employer. The people present at the wraparound meeting should be those who know the students and will assist the students in resolving their challenges to succeed in college and the workplace.

The student also conducts this meeting, which provides another opportunity to teach students they are responsible for their lives.

“We talk to them about how you’re responsible for your needs being met,” she said. “It’s not the professor’s job; it’s not your parents’ job, it’s not even the different agencies you may be getting services from. It’s your job to get your needs met, so that means you’ve got to learn to ask for help when you need it.”

At the meeting the team talks about students’ needs. If they’re struggling in a class, they discuss tutoring, how much time spent studying, effective methods of studying and ways to approach professors if extra help is needed. If they need an internship they talk about different employers and options.

### **Why Project CASE works**





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Much of the direction from these meetings is based around the student's results in the Birkman behavioral assessment, which each student takes upon enrolling in Project CASE. It highlights interests, strengths and stress points. This serves to highlight potential major or career options and give the student and CASE specialists ideas of how to approach problems. Lechtenberger said simple adjustments often fix problems.

For example, the assessment showed one student was much more relaxed and energetic when he was outside. Spending hours in classrooms or the library studying drained his energy and adversely affected his academic performance. Knowing how critical being outside was, Lechtenberger suggested the student find a place outdoors where he could study. When the weather was bad, he reserved the tree room at the Burkhart Center so he could still have a sense of the outdoors. She also suggested he take frequent breaks and go for a walk or check out a bike and go for a ride.

"It's amazing how much that changed his ability to handle stress because he knows that about himself now," she said.

He now is studying [range management](#), and his best semester academically included the assignment to count white-tailed deer and quail in the fields surrounding Lubbock.

The Birkman assessment and wraparound meetings provide students with tools to recognize and address many of the obstacles, Lechtenberger said. Many obstacles aren't unique to students with ASD, but these students frequently need to learn how to cope with problems or are so consumed with anxiety they miss out on social cues that could help.

The value of Project CASE comes from teaching the students to act on their own behalf, not doing the hard work for them. Stephen Castro, a senior studying electronic media and communication, said having a person and place to ask for help has taught him how to resolve his own concerns.

"If I have a question about class, if I have a problem, I contact my learning specialist and she gives me advice to help me find the solution," he said.

Same for David Siegel, who will graduate in December with a minor in theatre. He has been part of Project CASE since its inception and said the wraparound meetings focused on getting him organized and making sure he had the tools necessary to solve problems.

"They give me confidence," he said.

### **Project CASE: It works**

CASE has a 76 percent retention rate. It's almost twice the nationwide retention rate of students with ASD without additional support, and close to the 83 percent retention rate of Texas Tech as a whole.

"This is a truly innovative program," said Wes Dotson, co-director of the Burkhart Center.

He shared other statistics – CASE has 19 graduates, 18 of whom are competitively employed. They have a couple who are pursuing graduate degrees. Anecdotally, students with ASD are happy. They’re getting more out of their education and are more prepared to enter the “real world.” The program is earning recognition as well; in July, Lechtenberger, Dotson, learning specialist Rachel Harmon, Castro and his parents sat in front of the National Association of Councils on Developmental Disabilities and talked about all the good CASE has done. Castro’s parents said they were told when their son was only 4 or 5 years old that he would never speak. Castro then talked about his college experience.

That was Castro’s third presentation in front of a large audience. He discussed his career goals – he wants to work in TV production, preferably sports – and his experience and training from another grant-funded program, Project SPEAK, which helped him become comfortable with public speaking.

This wasn’t his first experience with publicity, either. In April, Castro organized an autograph session with Texas Tech football coach Kliff Kingsbury; prior to the session, he contacted Project CASE students, staff and parents to raise money for Court Appointed Special Advocates (CASA), Kingsbury’s favorite charity. He presented the money and a signed 2016 Autism Walk T-shirt to Kingsbury at the autograph session.

“He was nice, and he was very welcoming toward us,” Castro said of the coach. “I gave him the money that we were able to raise for CASA.”

Castro is one success story. Siegel is another. He got involved with the BurkTech Players, a theatre troupe made up of theatre and dance students and Project CASE students, at its inception two years ago and found his home on stage. He has career plans that sound quite similar to any other aspiring actor.

“I’m going to try to get a place of my own and get a job while I try to pursue my acting career,” Siegel said. “I’ll look for theatre or entertainment, something like that, but I have to have a job that can put food on the table until I can get a career in that. You’ve got to find the opportunities first.”

There are plenty more stories. A year ago a student graduated with a bachelor’s degree in [architecture](#). He needed an internship, and his learning specialist reached out to a number of local architecture firms to help him set that up. It included updating the strategic plan for Buffalo Springs Lake, and the [Center for Active Learning and Undergraduate Engagement](#) (CALUE) gave him a scholarship to pay for gas money so he could get out there, take pictures, create drawings and put the project together.

“He told us when he came in he wanted to be an architect so he could create beautiful public places,” Lechtenberger said.

He also needed a studio course that looked at designing public spaces. For most architecture students, that course meant [six weeks abroad](#). He didn’t want to go. His adviser told him they’d worry about it when the time came for him to do it. If nothing else, the [College of Architecture](#) offered programs in Mexico and Colorado, which were closer to home and more familiar.



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The time came. He talked to his CASE learning specialist and academic adviser, then packed his bags and went to Seville, Spain.

“He was so quiet and reserved, but when he went to Spain he was sending us texts with pictures and he was smiling from ear to ear,” Lechtenberger said. “He was just beaming. He was having such a good time, and we would have never predicted that was possible.”

That student got a job at an architecture firm in Dallas when he graduated; his employer told him the firm would pay for a master’s degree should he decide to get one.

Other students work or volunteer at places that helped them when they were younger. Many used hippotherapy as treatment; they now are able to volunteer at the Therapeutic Riding Center and be a part of providing that therapy to younger students. Some students volunteer at the Ronald McDonald House, remembering the many hours they spent in hospitals and medical offices and how frightening those experiences could be.

“They’re taking their experience and turning that into a positive with encouragement and support to others,” Lechtenberger said. “It’s about making connections and teaching them how to find those connections. That goes back to it is their responsibility to get their needs met.”

These stories are the message Lechtenberger, Dotson and the Burkhart Center staff are sharing now. The grant they earned five years ago expire this year, and they are looking for ways to fill the financial gap. Earlier this summer the Burkhart Center hired a full-time development officer to apply for grants and work with potential donors. They also will charge a fee for students enrolled in Project CASE. Lechtenberger voiced concern about the transition and the program’s affordability for the students who need this level of support.

Providing this support is important, though, and anytime she wonders she remembers the student majoring in range management who always wants to be outside. He is from a family of Red Raiders – parents, aunts, uncles, grandparents, siblings. He had no hope of joining the scarlet and black until his sister, who was a nurse in Lubbock, heard about Project CASE and passed it on to her family.

“He continues to tell me the day he found out he could be a Red Raider like the rest of his family was the happiest day of his life,” she said, pausing for a moment as her eyes filled with tears. “He has all the Red Raider gear; I see him in it all over campus. He’s just a very fine young man that people didn’t necessarily have high hopes for in college until he came to Texas Tech and Project CASE. We couldn’t be prouder of him.”



# Web Only

## **Building a Legacy: Architecture Alumnus Now Helping to Grow Texas Tech**

Brian Griggs is working to share his passion for the university.

By Glenys Young

From the Administration Building's carillon towers and central stairways to the stone detailing over the Frazier Alumni Pavilion's entrance to the ornate façades found on many other buildings, Texas Tech University is known for its Spanish Renaissance-style architecture. Perhaps no one has quite as much passion for that architecture as Brian Griggs.

Griggs, who came to Texas Tech as a student in the [College of Architecture](#), now has come full circle. These days, he helps to design and build new structures on campus, and he's embarked on a mission to share his passion with the world.

### **A strong foundation**

As a high school student in the Dallas suburb of Farmers Branch, Griggs knew he wanted to be an architect.

"I loved things like drawing, sketching and model building, so any career that included crafts like that fascinated me," he said.

A two-week architecture camp the summer after his freshman year sealed the deal. A year later, he was working as a draftsman under Deen Ritter at D.E. Ritter Architects in Farmers Branch, a job Griggs calls "a treat." But he didn't know yet where he wanted to go after high school. College was the obvious next step, but Texas Tech wasn't on his radar.

In the spring of 1998, his junior year, a career advancement program at his school gave him the opportunity to visit the Dallas office of HOK, a global design, architecture, engineering and planning firm, where a helping hand pointed him in the right direction.

"While there, the architect that toured me through their office, David Holmes, first told me about Texas Tech and urged me to consider it," Griggs said. "That fall, I went with my parents to Lubbock for the first time. We arrived on a Sunday, and I remember everyone was somber because Texas Tech had just lost to Texas A&M the day before. I can't explain why, exactly, but I fell in love with Texas Tech immediately."

Griggs started at Texas Tech in the fall of 1999. He has fond memories of his time in the College of Architecture as well as the respect students from other areas had for it.

"Even when I first visited Texas Tech, people mentioned, 'The lights never turn off over in the Architecture Building,' and they were right," Griggs said. "On the first day of class in Design Environment & Society, a standard first-year course for architecture students, all

300-plus freshmen sat in the basement lecture space in the old Business Administration building, and we were told to look to our right and left and know that only one in three or four people around us would graduate from the program.”

### **Building a career**

Not content just to graduate, Griggs wanted to find an opportunity to stay involved in the profession throughout his student career.

“Deen thought I had begun to develop some strong skills in completing architectural renderings, so I contacted a number of Lubbock-area architecture firms to see if they needed someone who could complete renderings for their projects at cheaper rates than traditional contractors,” Griggs said. “Most firms did not have a need for this, but an architect partner at Tisdell Minckler & Associates, Richard Minckler, recommended I contact Parkhill, Smith & Cooper.”

After Griggs called and submitted a resume, a month passed with no word. Then one morning early in the fall of his sophomore year, the phone rang. On the other end was Mary Crites, head of the higher education studio at Parkhill, Smith & Cooper (PSC).

“Two days later I interviewed for a position as a contract architectural illustrator,” Griggs said.

He started his new job in September 2000, and it wasn’t long before he found his calling.

“Though I did work for all of PSC’s design sectors – renderings for hospitals, elementary schools, retirement communities and banks, amongst others – I also did a lot of higher education work and learned a lot about higher education work under Mary’s leadership,” Griggs said. “At first, higher education just seemed like another architectural market, but over time, my opinions on college and university work evolved into a sincere love and passion for this area of design.

“One of the greatest American inventions of the last 200-plus years is the American college campus. It has emerged from the old European model of an ecclesiastical hodge-podge of buildings into an idyllic environment that has become a required destination for millions of American young adults and a mecca for other students from around the world. Every new facility or campus master plan is an opportunity to add beauty or added pride-of-place in an environment that shapes the lives of millions of students.”

In late 2004, as Griggs prepared to graduate with master’s degrees in architecture and business administration, PSC had some projects on the horizon Griggs knew he had to be a part of, one of which was Texas Tech’s new [Rawls College of Business](#). He requested to be staffed to the project and became an intern at PSC upon his graduation.

He began working on the Rawls College project in 2005 as a member of the project team focusing first on programming and later on master planning. After becoming a licensed architect in May 2009, Griggs served as one of the project’s architects until its completion in 2012. He even circled back to it in 2015 to develop façade design solutions for the west expansion to the building.



But that building wasn't his sole project for those years. During that time, he worked on several building projects, including many at Texas Tech. He was a team member for the [Athletics Hall of Fame](#) construction at the Football Training Facility and in the [United Supermarkets Arena](#) and served as the architect-of-record for three phases of the [College of Media and Communication](#) renovation.

He moved in early 2011 to lead PSC's office in Amarillo, where he met his wife Jaime and recently welcomed the arrival of their son Will in 2015. Since making the move, he's worked his way up, becoming first an associate and later a principal with the firm.

He continued working on projects at Texas Tech, serving as project manager and architect-of-record for the [Bayer CropScience Lubbock Seeds Innovation Center](#) and as an architectural and planning history consultant for the Texas Tech and Texas Tech University Health Sciences Center [master plan](#) update. His latest project, which is still under construction, is the new office building for the [Texas Tech University System](#).

The Seeds Innovation Center, which he called "a very challenging project," and the master plan update are the two Griggs said he's most proud of.

"The new headhouse and greenhouse was an effort to create a 21<sup>st</sup>-century research facility that fit within the Spanish Renaissance fabric of the Texas Tech campus," he said. "The main entry arch to the building is the first at Texas Tech in over 60 years to draw directly upon a Spanish Renaissance case study.

"On the campus master plan update, so much of what our team accomplished was to take an already great campus master plan, adapt it to the issues of 2014 and essentially fill in the gaps. I got to develop concepts for architectural features and components to the future Texas Tech campus that, though small in scale, will go far in finessing the Texas Tech campus fabric to become a world-class institution over the next 10 years."

### **Sharing his passion**

In 2009, Griggs was in Chicago for a Texas Society of Architects board meeting and stopped by one of the few architecture-only bookstores in the United States, Prairie Avenue Bookstore. Upon learning the store was planning to close in a few months, he took his time perusing the shelves. And there, in the loft where antiquarian architecture books were housed, he found an oversized book with damaged binding and the imperial seal of Spain: "Renaissance Architecture and Ornament in Spain" by Andrew Noble Prentice.

"I opened it to a page with a detailed hand-drawn elevation of the façade to the Colegio de San Ildefonso at the Universidad de Alcalá – the façade that our Administration Building façade is based upon," Griggs said. "I quickly bought the book and had it shipped back to Lubbock. When going through it in greater detail, there were other façades and elements that I recognized from architecture seen on the Texas Tech campus, but that work had not been mentioned in the one book to date written on the history of Texas Tech's architecture, 'Texas Tech: The Unobserved Heritage,' written in 1985 by Nolan Barrick, who was a former head of the architecture program and college architect from 1953 to 1965."

A few months later, PSC was competing for a new project at the university and Griggs' superiors asked him to develop a narrative on Texas Tech architectural history to include with the proposal.

"In writing that narrative and knowing that Mr. Barrick's work did not include some of the information recently learned from the Prentice book," Griggs said, "I decided to write my own book."

And that initial effort has led Griggs to some great discoveries.

"When this book effort began, it was merely an interest in telling a story about a unique architectural style at a university," Griggs said. "Since then, over the last seven years, research has led me to the distinct and objective opinion that perhaps no other college or university in the United States has had its heritage more significantly impacted by its architecture than Texas Tech. That is a bold statement, but one must ask where would this institution and its traditions be if not for its architecture? Our school colors, original mascot, fight song and a host of other elements of our heritage are owed to our campus architecture.

"The dramatic story of how our architectural style and campus came to be is a great and compelling story. We have something in our architectural heritage that most U.S. universities do not have, and it is a shame so few people know much of anything about it."

[James Brink](#), director of the [Honors Arts and Letters](#) program, has been following Griggs' progress for several years.

"One measure of a civilization is in its 'monumental architecture,' those structures and styles people build to last. He is chronicling, and more importantly explaining, the history of Texas Tech's physical plant from the first five structures to the current construction," said Brink, an associate professor in the [Honors College](#). "I have been impressed with his research skills aided tremendously by his architect's eye and passion for his alma mater. He has the 'big vision' so the stories of individual buildings fit in with overarching philosophies and both internal and external influences to form a convincing picture of why we are the way we are."

### **Texas Tech's architecture**

One thing Griggs is quick to mention is that, contrary to popular opinion, the Spanish Renaissance architecture of Texas Tech is not just some Spanish response to architecture in the Renaissance era or some quaint combination of brick, stone and clay tile roofs.

"There were multiple architecture styles in Spain over the course of the renaissance era," Griggs said. "Thanks to the suggestion of noted Boston architect Ralph Adams Cram to his Houston-based protégé William Ward Watkin for the use of a Spanish style for a new library in Houston in 1923, Watkin – Texas Tech's original design architect – convinced college leadership in 1924 to proceed with the design of the first college in the U.S. designed in the Plateresque style. The *estilo plateresco* was named in Spain for the resemblance the ornate ornament used in the style bore to the popular silver (or *plata*) jewelry style of the period."





In addition to five structures discovered by Barrick in his research in the early 1980s, Griggs has found six structures or edifices that were drawn upon by Watkin and his partner Wyatt Hedrick in the original designs for the Texas Tech campus. Nine reside in Spain, one in Balboa Park in San Diego and one at the Mission San Jose de Aguayo in San Antonio.

“Texas Tech is a ‘first vernacular’ institution as its design was drawn upon from architecture directly from Europe or elsewhere and not from another college or university,” Griggs said. “There are so many beautiful colleges and universities across the country, but you would be surprised how many are based upon the architecture of prior institutions. For example, Oklahoma State owes much of its architectural heritage to Princeton, while Baylor, Dallas Baptist University and Mercer owe their style to the original Wake Forest campus, which was based upon the architectural style at Johns Hopkins.

“There are a lot of campuses in American higher education that people call beautiful. Stanford is beautiful, and so is Duke or Cornell or Bryn Mawr. But much of those institutions’ beauty is owed to their vegetation and topography – two things which Texas Tech has little of, even in its mature years. But today, Texas Tech is nationally respected as a campus in large part because those who know it realize it literally emerged from a flat sea of nothingness in one of the last-developed regions of the Great American Desert, as West Texas was referenced a century ago. Leadership at Texas Tech have committed us to remain true to the Beaux-Arts and Plateresque heritage of the original campus plan, which we have done. This is not a cheap or easy course to take, but the university and university system have remained steadfastly committed to this course, which sets us apart in the present age of higher education.”

Joanna Conrad, Texas Tech University Press assistant director and editor-in-chief, has been working closely with Griggs as he writes the manuscript. She said the work he’s doing makes an important contribution.

“Over the past six decades, there have been many significant studies of Texas Tech University but comparatively little has been written about Texas Tech’s architectural history,” Conrad said. “The work Brian is doing is so exciting because it seeks to fundamentally remedy that omission, not only documenting the inspiration for our oldest campus buildings but also exploring the fascinating story behind how that architectural style was carried all the way to a West Texas college campus.”

Conrad believes Griggs is uniquely qualified to write such a work.

“Throughout this process, I have been amazed at the breadth of Brian’s knowledge, and he can convey architectural terminology with both accuracy and enthusiasm,” she said. “It is so apparent that his alma mater is a true passion for Brian, and he is so excited about the prospect of sharing his work with the entire campus community.”



For now, Griggs is working to finish his book, “Opus in Brick and Stone: The Architectural and Planning Heritage of Texas Tech,” which is in negotiations to be published by Texas Tech University Press.

“My hope is that the book will spur greater understanding, pride and synergy in expanding and honoring the architectural heritage of Texas Tech,” Griggs said.



# Web Only

## **Communication at the Heart of Texas Tech's Quality Enhancement Plan**

The Center for Global Communication and the Communication Training Center will be tasked with creating a global communication culture with students and faculty.

By George Watson

The world has never been closer to the fingertips of those living and working in it. Almost instantaneously, people can access information from the far reaches of the globe or communicate face to face, thanks to tremendous advancements in technology.

However, being able to communicate on a global scale does not always equate with possessing the knowledge or skills for effective communication. Today, global communication is at the heart of solving contemporary, multifaceted issues such as cyber security, environmental degradation, gender equality, social conflicts and energy concerns that exist in communities around the world.

It is that realization for the need for enhanced global communication that is the driving force behind the [Quality Enhancement Plan](#) (QEP) implemented by Texas Tech University in 2015 as part of its Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) reaccreditation process. "Bear Our Banners Far and Wide: Communicating in a Global Society" will enhance communication skills and global awareness of Texas Tech undergraduate students with the aim of giving them an edge in the global workforce upon graduation.

"We have a comprehensive vision for investing in the improvement of communication on campus," Vice Provost Genevieve Durham DeCesaro said. "We've been looking at improving and assessing communication and our students' learning in terms of communication in ways that place us at the forefront of other universities in the state. I think we are really investing in communication in some very unique ways."

As part of the QEP's vision, Texas Tech has established two new training centers focused on communication that will not only help undergraduate students become better global communicators but will give faculty and graduate students the tools and skills necessary to develop better communicators.

The Center for Global Communication (CGC) will work closely with the [Office of Planning and Assessment](#) and experts on campus to develop and implement tools that will provide the best means to measure QEP student learning outcomes (SLOs). The Communication Training Center (CTC), meanwhile, will train faculty and graduate students in all disciplines with the tools and skills necessary to improve both oral and visual communication skills for engaging undergraduate students, the general public and even the media and civic groups.

“There was a sense from the various committees that assisted in the development of the QEP that students didn’t really think of themselves as part of a global society,” said Gary Smith, QEP Topic Development Committee Chairman. “They identified with their hometown and didn’t really think about being from Texas or being a Texan. We want them to feel like they are part of a global society, that interactions are important and what they do here in their field of study or profession can affect someone on the other side of the world, and vice versa.”

### **Communicating Globally**

It wasn’t just enough for Texas Tech to develop the Quality Enhancement Plan with a focus on communicating in a global society. The SACSCOC’s on-site reaffirmation committee required Texas Tech to demonstrate students were learning and could apply what they learned, hence the SLOs.

Texas Tech created three SLOs with a viable plan to assess their achievement within the QEP:

- Students will demonstrate competent communication skills.
- Students will competently analyze their development of communication skills and global awareness.
- Students will articulate global awareness and openness to differences in culture and context among diverse human groups.

“The idea is we want to be encouraging our students to document their work here,” Durham DeCesaro said, “and not just in their academic major or co-curricular activities but to really, comprehensively, pay attention to what they are doing while a student at Texas Tech in all areas so by the time they leave they have a collection of information that can really provide a lot of insight into what their learning progress was over the four years they were here.”

That is where the Center for Global Communication (CGC) comes into play, acting as the overarching center directing the QEP’s communication initiative. Led by Paul Paré, a professor in the [Department of Chemistry and Biochemistry](#), the CGC will implement programs to engage undergraduate students in the sensitivity of cultural issues in order to enable them to interact on a global level and give students the tools that are necessary to effectively communicate with others around the globe.

How, exactly, the CGC will measure student success in global communication related to their SLOs is still in the initial stages with several ideas being considered. Incoming freshmen and fall 2016 seniors will be tested to get a baseline understanding of their perception of their place in the world in terms of global communication. Then, students will be tested each year to measure their progress.

One possible idea Paré discussed in terms of developing interest in the CGC is to create a certification program for students to complete that would enhance their undergraduate degree and make them more attractive to potential employers.

Students would be able to choose certain courses to take, certain co-curricular activities or lectures they could attend that would be a part of earning this certificate. They would have



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the opportunity to communicate the results of these activities. After meeting a yet undetermined number of course requirements and co-curricular activities, they could earn this certificate and become known as Global Scholars.

“It will put students a cut above those at other schools, Paré said. “You have your degree and as a Texas Tech graduate you also have the distinction of having training in communication as you enter into your area of specialization. Millennial students identify with these types of badging programs.”

### **Training the instructors**

In order for a student to communicate on a global scale, they have to learn how to do so, and that starts in the classroom. Every semester in every classroom on every college campus, there are at least a few students with glassy-eyed looks as an instructor or professor attempts to communicate the day’s lecture.

In the majority of cases, the struggle to understand the material stems from its complexity. In other instances, however, that struggle comes from the instructor’s lecturing style or, in some cases, their communication skills, which could always use an upgrade, especially as a new generation of students more attuned to new kinds of media and teaching styles emerges.

To that end, Texas Tech has created the Communication Training Center (CTC) housed in the [College of Media & Communication](#). The aim of the CTC is to provide classroom instructors in all disciplines with the tools and skills necessary to improve both their oral and visual communication skills.

“The CTC is a space that encourages self-reflexivity where faculty members and graduate students who are teaching in the classroom will have the opportunity and encouragement to consider how their communication styles are best supporting their goals toward student learning success,” Durham DeCesaro said. “Much like the [University Writing Center](#) that targets undergraduate and graduate students, now we have this CTC that is a centrally located resource devoted to the improvement of communication skills on campus.”

The direction of the CTC has been put in the hands of Luke LeFebvre, an assistant professor of communication studies, who has extensive experience in communication and directing communication centers at the College of Southern Nevada as well as serving as a basic course director.

LeFebvre, who also has been extensively published on the subject in various communication journals, said being on the ground floor of such an ambitious project and the commitment from the college and the university drew him to the position.

“There are not many times where the department, the college and the institution are on this upward trajectory all together,” LeFebvre said. “That is something I wanted to be a part of.”

The CTC is open to faculty and graduate students in any college within the university, who will then impart their knowledge to not only students in the classroom but also the media, civic leaders, legislators and the public. These lessons will come not only through oral presentations but also using multimedia teaching presentation training.

One aspect of Texas Tech that excited LeFebvre is its recent designation as a Tier One research institution by the Carnegie Classification of Institutions of Higher Education. But he said just attaining Tier One status is not enough; there have to be enhanced communication skills so everyone understands the message and lessons being imparted.

“It’s about understanding the audience and how you can adapt your message to that audience so they understand the importance of our research and also comprehend what we are saying,” LeFebvre said.

College of Media & Communication Dean David D. Perlmutter said LeFebvre’s experience and enthusiasm made him the right fit to direct this new initiative.

“The moment we met Luke we were impressed by his broad and deep knowledge of effective training and workshop best practices, his collaborative nature and his ‘can do’ attitude,” Perlmutter said. “His vision for the center matched Texas Tech’s aspirations in the Quality Enhancement Plan and beyond.”

As much as the CTC is geared toward helping faculty and staff enhance their communication skills both inside and outside the classroom, a primary focus of the center will be training the next generation of communication directors, who will then establish communication training centers at other universities across the nation.

“I think we can be a flagship for our nation in training the next generation of center directors to impact undergraduate student learning at and beyond Texas Tech University,” LeFebvre said.

### **Eye toward the future**

While communication and the two centers are the focus of the QEP for the next four years, the hope is that this initiative is just the beginning of an on-campus cultural shift to create a focused attention to communication. Durham DeCesaro said the same thing happened in the past when the QEP was focused on ethics.

“My sense is that communication is always going to be an important part of what our employers and our graduate schools are looking for in graduate students,” Durham DeCesaro said. “So if we can really embrace the focus on improving our communication skills on our campus, we certainly can position ourselves very well to prepare our graduates for where they need to go.”

Smith and Paré said the target date to have the two centers up and running full speed will be spring 2017. At that point, Paré said, the first round of student assessments will be in place, as will the core courses and co-curricular activities for Global Scholar certification.

“We won’t roll out the program until all the components have been put in place,” Paré said, especially since the Center for Global Communication and the Communication Training



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Center are such significant endeavors to advance the undergraduate experience for Texas Tech students.”



# Web Only

## **Faith, Small-Town Roots Fuel Adkins' Competitive Fire**

The Texas Tech University high-jump standout and Idalou native surges into Olympic bid.

By George Watson

Overcome by emotion, Bradley Adkins dropped to his knees.

On a cool, wet track at Hayward Field in Eugene, Oregon, the Texas Tech University senior high jumper saw everything he'd worked for, everything he'd dreamt about, happening right before his eyes. With a spot on the Olympic track and field team up for grabs, Adkins had done what he needed to, clearing the bar at 7-feet 5-inches to maintain a third-place standing among the final seven men remaining at the U.S. Olympic Trials.

He also was one of only three competitors remaining who had already achieved the Olympic Standard, meaning someone behind him would have to clear 7-6 to pass him and possibly take his spot on the Olympic team. Deante Kemper, in fourth place, passed on his final attempt at 7-5 to attack the 7-6 height as Adkins could only watch.

Kemper missed.

Adkins was in. He's an Olympian

"It was such a relief," Adkins recalled. "I remember standing there by my coach and after Kemper missed and I knew I was in, I just dropped to my knees and thanked God. I thanked him for this opportunity and for blessing me with this. Looking back, after all the struggles, all the ups and downs of the season, to be able to be at this point, it is so surreal. It's just an awesome experience."

Adkins will now head to Rio de Janeiro, Brazil to compete for Team USA in the 2016 Olympic Games. The high jump qualifying round is scheduled for Sunday (Aug. 14) with the finals slated for Tuesday (Aug. 16). It is the fulfillment of a dream that will put a cap on a tremendous collegiate career in the Red and Black.

"We had a student-athlete class my freshman year, and I put this as one of my goals that I wanted to do Rio 2016," Adkins said. "But to actually think I could fully achieve that didn't happen until I jumped 7-6 my junior year at indoor nationals. I realized then I could do this and that I'm good enough to potentially give the Olympics a shot. It's been a dream and something I've wanted to achieve, but for it to actually happen and come to pass is so surreal and humbling at the same time."

Though, given the tremendous success Adkins achieved over a four-year college career, it's anything but surprising.

### **Instant success**

The Idalou native made an immediate impact upon stepping onto the Texas Tech campus. As a freshman he finished third at the Big 12 Indoor Championships and tied for third at the Big 12 Outdoor Championships, which earned him a spot at the NCAA Outdoor Championships. His effort earned him honorable mention All-America honors.

“My freshman year was tough but I was just trying to go out there and compete,” Adkins said. “I wanted to soak in as much as I could and try to work on things technically. I had to break a lot of old habits but I still tried to soak it in, learn as much as I could and compete.”

It helped Adkins there was a change in the Texas Tech coaching staff. James Thomas took over as the Texas Tech jumps coach after Adkins already had signed his letter of intent, and initially Adkins wondered if he’d made the right choice. Turns out, the pairing of Adkins and Thomas proved critical, especially after Adkins’ struggles as a senior.

“He’s always pushing us to compete,” Adkins said. “He has brought so much competitiveness. Jumping against NCAA champions in practice, you’ve got to come with it, with high intensity. This year, especially, he never lost faith in me, was always positive and knew I could do it.”

Adkins’ drive to succeed is found not just on the track. A marketing and management major, Adkins puts the same effort into his classwork and is just a few hours shy of earning his degree.

Bob McDonald, a professor of marketing in the [Rawls College of Business](#) who was also a track and field athlete, said Adkins doesn’t do just enough to get by despite having a very time-consuming extracurricular schedule. In a personal selling class taught by McDonald, students were required to raise \$300 for a local nonprofit organization. Adkins raised \$800.

“He is an excellent student, one of the best in each class,” McDonald said. “He works hard and always stays on top of his work despite his hectic competition schedule. He strives to excel. I am confident he was also motivated by his compassion to help others.”

Adkins continued his athletic success through his sophomore and junior years, earning three first-team and one second-team All-America honors through the indoor and outdoor seasons. He even captured the title at the Big 12 outdoor meet as a sophomore and was poised to be a team leader after finishing second at both the indoor and outdoor NCAA championships in 2015.

Little did Adkins know his biggest challenge was still ahead of him.

### **Maintaining faith**

Adkins was ready to call it quits. Hang up the spikes for good.

Riding a tractor on the family’s Idalou farm – as he likes to do when away from school – Adkins had a pretty revealing conversation with God, admittedly more out of frustration than seeking answers.





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He'd just come off a disappointing senior season in which he shouldered great expectations going into the fall. He had finished second in the high jump in both the indoor and outdoor national championships in 2015 and, with JaCorian Duffield having graduated, was going to be the focus in the event.

But Adkins struggled in 2016. Despite earning All-America honors in both indoor and outdoor and reaching the Olympic standard when he cleared 7-6 at a meet on Feb. 13, he finished ninth at the indoor national championships and third at the Big 12 Conference championships, then managed only a sixth-place finish at outdoor nationals after finishing second at the Big 12 outdoor championships.

"I think he felt a lot of pressure this year as a collegian that he was supposed to be the best, and maybe that was hard for him to handle," Texas Tech track and field coach Wes Kittley said. "The proudest thing to me is his attitude. He kept going through it all."

Little did Kittley or the other coaches know, however, those struggles had a profound effect on Adkins' mentality by the end of the year, so much so that he thought he was done.

"Throughout the year I was trying, learning a lot, growing and trying to stay positive and endure through this," Adkins said. "I just tried to shake it off and go to the next meet, thinking the breakthrough was about to come, and it didn't. So after nationals I came back and was sitting there on the tractor and I just started praying. Right there, I hung it up and was done with jumping because it wasn't what God wanted for me."

Adkins might have thought he was done. But he was just about the only one.

Two days later, Adkins said, he started receiving encouragement from others. A person in the airport recognized him and stopped him, telling him he would see Rio this year, and it wouldn't be from Texas. That began to refuel the competitive fire within Adkins.

"Things like that, speaking encouragement to me, speaking confidence in me, hearing that got me motivated because I was done," Adkins said. "God wasn't done. He's going to use me. He spoke to me and said Rio is the plan, and from that moment, it was like, 'OK, we've got this and we're going to do this.' Seeing the path God brought me through to this point is so incredible. I wouldn't change that for the world."

The effect almost was instantaneous on Adkins' workouts. Kittley said Adkins had one of his best workouts of the year the day before leaving for Oregon, and Kittley noticed the change in his protégé.

"I was on the plane with him on Wednesday when he was going to the trials and I was going to Indianapolis to recruit," Kittley said. "He was like, 'Coach, I'm ready to go.' He had that faith and a great practice the Tuesday before. That's part of the old Bradley."

### **Championship background**

Office of Communications and Marketing

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The foundation for the old Bradley was established long before he arrived at Texas Tech. Thanks to a pedigree developed at Idalou High School, Adkins knew quickly what it took to win.

As a junior, Adkins was a member of the Wildcats' state champion football and basketball teams during the 2010-11 school year. Idalou became the first Class 2A school and only the sixth school (at the time) in the history of Texas high school athletics to capture football and boys basketball state titles in the same season.

Later that spring, Adkins cleared 7-foot for the first time, doing so at the UIL State Track and Field Meet in Austin. But he finished second, behind eventual teammate JaCorian Duffield.

As a senior, Adkins again helped lead the Idalou basketball team back to Austin, but the Wildcats came up short, losing to White Oak in the semifinals. Adkins then returned to Austin a few months later for the state track meet, and again finished second in the high jump, though he did win gold in the 110-meter hurdles.

Those two years' worth of success, however, formed the foundation for what Adkins would become over the next four years.

"It helped me be a competitor," Adkins said. "Having all that success, I just hated to lose at that point and it definitely kept that competitive edge and fire within me. So that's kind of something I brought to the table at Texas Tech. I've done a lot of losing this year but I was still able to keep competing, staying positive and keep working and fighting through those tough times."

Long before Adkins had finished his high school résumé, and especially after jumping 7-0 at the state track meet his junior year, he began to attract a lot of attention from schools across the country. Most importantly, he caught the eye of a coach who came from the same background and knew how good small-town athletes can be.

"For me, being a West Texas guy from a small town, we were so fortunate to be able to recruit him and sell him on coming to Texas Tech," said Kittle, a native of Rule. "He's a local kid, a farm boy raised just like me and so it's thrilling to me for him to be a West Texas kid and the first one from his hometown to every go to the Olympic Games. We can say the last time he put on a Red Raider uniform he made the Olympic team. It doesn't get much better than that."

Kittley actually recruited Adkins at a basketball game in Lamesa and noticed his athleticism dunking the basketball. But he also noticed Adkins' toughness and how his parents had him well-grounded.

And one of the keys to Adkins' collegiate success might be his proximity to his hometown. It's not unusual to find Adkins back working on the family farm when he's not in class or training.

"We joke with him that he has to run home and jump on a tractor, or a cloud is coming up so he'll be jumping on top of a module to tarp it down so it doesn't get rained on." Kittley



said. “But everyone knows about his work ethic, his toughness, which means a lot. He’s been the perfect student-athlete academically and in leading our team, working hard, paying the price in the weight room and being a spiritual leader of our team, which is very important to me. He’s done it the right way and for him to be this close to Lubbock, his family, everybody, nobody is more of a Red Raider than him. It just makes me proud to see somebody that really deserves it have something good happen to him.”

### **Blame it on Rio**

As much of an achievement as just making the U.S. Olympic team is, it’s evident that’s not good enough for Adkins.

Backed by a renewed confidence, Adkins goes into the Olympics certain of his abilities and how that will translate to competing in Rio, even if he’s not sure where that effort will place him when it’s all said and done.

That doesn’t mean there aren’t concerns. One of the areas that both Kittley and Adkins identified as leading to the jumper’s struggles this season was his approach, particularly the last three steps approaching the bar before his leap. Kittley calls it “getting long,” and is part of the reason why the coach was somewhat surprised Adkins qualified, not because of his abilities but because of his inconsistencies.

That inconsistency, however, seems to have disappeared.

“I don’t know that he turned a corner other than he never gave up and never changed giving his best effort every time,” Kittley said. “He may have thought the year was over but when the show came on he still bore down and did what he knew to do, and I think that makes the difference.”

Kittley has sent close to 20 former athletes to the Olympics, including Adkins and former standout sprinter Gil Roberts to Rio. Knowing what Adkins has gone through, Kittley is sure Adkins will have some awestruck moments but will be ready when the lights come on.

“I think the opening ceremony will be where he’s going to feel the most nervous and realize what this thing is all about,” Kittley said. “But it will be the same thing once he gets his spikes on that first day on Sunday. I think he will realize, OK, he’s in his element, this is what he’s fixin’ to do. I’m going to tell him to do what he’s always done and that is go out and compete. I think that light will come on.”

The Rio Olympics have drawn some criticism and concern for health issues surrounding the city, particularly the Zika virus. But there are concerns about the Olympic village where the competitors are housed. Adkins, though, is not that worried, having received advice and methods from the U.S. Olympic Committee on how to stay healthy.

“They’re already taking a lot of precautionary steps,” Adkins said. “We know what to do and what not to do. Our job now is just to go down there, say our prayers and hope for the best.”

Adkins, however, isn’t leaving it up to hope. He’s also not going to Rio just to show up, either. That competitive fuel, the work ethic formed so long ago, will be on display for the world to see.

“The goal right now is to just go down there and compete,” Adkins said. “I know if I go down there like I know I can and jump like I know I can and push myself, I can finish very high. Whether that’s a gold medal or not, I don’t know. But my goal is not to just go down there and show up. I want to go down there and compete and make them take notice. I’m going to shock the world, whatever that looks like.”



# Web Only

## Geology Researcher Rocked Out to Learn About Earth

Texas Tech's Jeremy Deans was one of 30 scientists aboard the JOIDES Resolution.

By Glenys Young

It's dark, cold and remote. It's vast, poorly understood and, for the most part, unseen by human eyes. It's probably not what you're thinking.

The ocean floor contains secrets about the Earth that have never been revealed, but a group of scientists, including a Texas Tech University researcher, hopes to change that.

"We know very little about our world's oceans; we know more about our solar system and our galaxy than we do about the ocean floor," said Jeremy R. Deans, a post doctoral researcher in [geology](#). "The most voluminous part of Earth, called the mantle, has never been accessed in place. You can go see parts of the mantle where they have been thrust onto the continent, but this is not where they form. We have to determine the properties of the mantle based on indirect measurements and experimentation."

Deans recently spent two months aboard the JOIDES Resolution, a research ship in the middle of the Indian Ocean, where he was one of 30 scientists studying rocks drilled from under the ocean floor as part of Expedition 360.

"This was the first of at least three expeditions that will drill down through the crust and into the mantle," he said. "Therefore, this expedition provided us with samples from the lower oceanic crust, themselves rare, and it sets the stage for the future recovery and study of the mantle."

### The voyage

Expedition 360 drilled along the Southwest Indian Ridge, which forms the seafloor underneath the Indian Ocean southeast of Madagascar. Its particular focus was on the lower oceanic crust at Atlantis Bank, what is called an oceanic core complex.

"The ocean floor, the top part of the oceanic crust, is formed at mid-ocean ridges. Oceanic core complexes form along slow-spreading ridges, like the Southwest Indian Ridge and the Mid-Atlantic Ridge, and not along fast-spreading ridges like the East Pacific Rise," Deans said. "Slow-spreading ridges comprise the majority of mid-ocean ridges on Earth, and we know very little about how the ocean floor is formed there. Oceanic core complexes form by exposing rocks that formed deeper down in the crust. The rocks are exposed due to a fault, which displaces one rock block past another. In this case, it was a normal fault where rocks that were once shallower are displaced deeper, and rocks that were once deeper are displaced shallower. Expedition 360 was the fourth expedition to Atlantis Bank, which provides the first opportunity to compare rocks from different holes along the same complex."

The decision to drill at Atlantis Bank was not arbitrary; the sea floor there is anomalous compared to the sea floor in other locations on Earth, which offers a distinct glimpse below the surface.

“The average depth of the world’s oceans is around four kilometers; at Atlantis Bank it is only 700 meters below sea level,” he said. “This is because of the fault that lifted up the rocks above the seafloor. Additionally, the sea floor there is gabbro, which forms deeper in the crust and is not expected to be at the sea floor. Most of the sea floor on Earth is covered by volcanic rocks called basalt, the material that erupts from volcanoes and makes up Hawaii.”

The expedition was funded through the International Ocean Discovery Program (IODP), which is supported by a consortium of countries including the United States, Japan, Great Britain, France, Germany, Brazil, Canada, India, South Korea, Australia, Italy and more. The program sails all over the world to investigate a variety of scientific problems associated with the ocean floor.

“IODP has open calls to participate in the expeditions,” Deans said. “IODP accepts doctoral students, post docs and faculty to sail. Typically there are certain specialties needed for each expedition. You submit an application indicating your specialty, why you want to sail and what your personal research will focus on. Then a committee decides who to offer to sail.”

IODP contracts with several different ships depending on the expedition goals. The JOIDES Resolution was named jointly for the former Joint Oceanographic Institutions for Deep Earth Sampling, which merged with another organization in 2007 to become the Consortium for Ocean Leadership, and the HMS Resolution, which explored the Pacific Ocean, its islands and the Antarctic region more than 200 years ago under the command of Capt. James Cook.

### **The research**

For Expedition 360, the JOIDES Resolution was home to 30 researchers and about 80 crew members for two months. The researchers were divided into three main groups based on their specialties: igneous geology, metamorphic geology and structural geology. Several smaller teams focused on the physical properties of the rocks, such as thermal conductivity and seismic properties; the rocks’ magnetic properties; microbiological life; and the rocks’ chemical composition. Each expedition’s groups are specifically selected according to the expedition’s goals and the rocks that are expected to be recovered. Lastly, two co-chiefs direct the scientific work on the ship.

“There is a distinction between a person’s onboard responsibilities and their personal research interests,” Deans said. “Given the limited amount of time and amount of rock that must be described before leaving the ship, each person is tasked with a certain responsibility. For example, I observed and measured all brittle features in the cores. However, my personal research focuses more on non-brittle or ductile features. Since the amount of material available to study is limited, people are encouraged to collaborate with similar or dovetailing research. This leads to people working together all over the world, one of the great successes of the program.”



Deans' research focuses on the change in shape of rocks, called structural geology.

"It is kind of like studying a car crash; I look at the rock that has changed shape (i.e., a crashed car) and try to figure out how and why the rock looks that way (i.e., how the car crashed) and what the rock looked like before it was deformed (i.e., how the car looked before the crash)," he said. "Rocks and minerals form in one shape, then through plate tectonic movements they are pushed and pulled into other shapes. For example, when rocks are pushed, they commonly form folds. When the oceanic crust forms, it is pulled apart as it is cooling, so you must consider how a rock will deform when it is partly melt and partly crystals."

On the ship, Deans was on a team with four other researchers, each with a different type of observations to make based on different subfields of structural geology.

"My responsibility was to measure all of the brittle features, including fractures and faults. Additionally, I was the leader of the team, so I was in charge of daily reports and weekly reports, along with our final results for the entire expedition," he said. "The other team members focused on the alignment of minerals, both when the rock was partially molten and when it was solid; veins, which are fractures filled with minerals; and relative timing of events. The majority of our focus is on identifying the minerals that define the change in shape and their orientation in space. Additionally, we look at thin sections of the rocks in the microscope to describe the same features as in the rock."

Deans also studied the orientation of the mineral alignment when the rocks were mostly molten, called magmatic fabrics, and the orientation of mineral alignment when the rock was completely crystallized, called crystal-plastic fabrics.

The ship is specially designed to accommodate the rigors of drilling very hard rocks and to describe those rocks.

"Deep-sea drilling is very difficult and requires a high level of engineering and special training," Deans said. "The ship has a 150-foot drilling derrick in the middle of it with a full-time crew specially trained for this type of work. The ship is equipped with tables that are designed to aid in description of these rocks; a variety of analytical equipment, ranging from measuring the magnetic field of the rocks to their chemical composition; and microscopes, making it the perfect place to study the rocks."

"The location of physically studying the rocks is not unique to the ship and some expeditions describe the rocks on land at a core repository, either in College Station; Bremen, Germany; or Kochi, Japan," he explained. "Because of the geographic location of Expedition 360 rocks, the core will go to Kochi, Japan. Being on the ship in a controlled space and location allows for the main focus of the scientists to be on the core, so the work is done in a shorter timeframe than if onshore."

## **Life on board**

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With only two months of research time available, researchers worked in shifts around the clock to maximize their capabilities. This also served to maximize space for the 110 people living in close quarters.

“Everyone works on shifts close to 12 hours since there is only so much space in the lab. Also, the 12-hour shift allows you time in your room when your bunkmate is on shift,” Deans said. “My team’s shift began at 2 a.m., so I typically woke up around 1:30 a.m., went to the mess hall, got breakfast and then went up to the lab to describe the rock recovered the day before.”

Rock was brought up on deck every 4-6 hours, and it had to be described quickly so more could be laid out. When not describing rocks, researchers inputted their data into spreadsheets and wrote reports. Meals were served from 5-7 a.m., 11 a.m.-1 p.m., 5-7 p.m. and 11 p.m.-1 a.m. A scientific meeting each afternoon included group presentations and updates on the drilling progress.

“The experience is amazing since you are wholly focused on describing and reporting on the core recovered every day, and you are on the ship with specialists in different fields leading to very rigorous discussions,” Deans said. “Additionally, the scientific team is from all over the world, so it provides a great cultural experience.”

He credited the ship’s 80 crew members – drillers, laboratory technicians, the captain and engine crew, and the service crew in charge of laundry, food and cleaning – with helping to ensure the researchers could do their jobs, but said it wasn’t always easy.

“Many people work very hard so the scientists can focus on their daily work,” Deans said. “The main challenges included getting all the work that is required done as a new shift is coming on or more core is coming on deck. The next challenge was getting along well with your team and the rest of the scientific group and staff. Personal space is very limited, so conflicts may arise. Internet access is limited, and keeping up with relations and responsibilities onshore can be difficult. Additionally, bad weather can make it very hard to get things done on the ship. Many people get seasick.”

On the whole, however, he said the team accomplished most of its goals and everyone got along well.

“This expedition gave me a tremendous amount of personal and professional experience,” Deans said. “I made several new friends and lifelong connections with people from all over the world. The expedition was physically and emotionally taxing, so a special bond was made with the people onboard. Professionally and scientifically, the experience is unparalleled with new network connections, rigorous scientific discussions, samples for future work and new lines of study for me and my students.

“The IODP is an amazing organization with many smart and hardworking people, and I hope the program continues unlocking the mysteries of the deep.”





# Web Only

## **O Canada! Texas Tech Soccer Standout Makes Olympic Debut**

Janine Beckie, who led the Red Raiders to a Big 12 championship in 2015, is playing for Canada in the Rio Olympics.

By Heidi Toth

Last summer the Women's World Cup ended spectacularly, with the United States beating reigning champion Japan 5-2 for its first World Cup title since 1999.

Host Canada had a respectable showing, advancing through the first two rounds before losing to England in the quarterfinals.

Janine Beckie watched the action on TV.

It wasn't the competition the former Texas Tech University soccer standout wanted. The dual citizen had been practicing with Canada for the better part of a year. She wanted nothing more than to be on the team, but was cut just before the World Cup.

That disappointment is old news now. In June the three-time All-American, career scoring leader for the Red Raiders and professional soccer player had her name added to Canada's Olympic team roster. She's now practicing in the heat and humidity of Brazil, preparing to represent her family's country on one of the biggest stages in the world.

"It's been kind of a whirlwind year, kind of a 180 from getting cut to now being rostered," she said. "It's a little bit of a Cinderella story."

### **The Canadian-American**

Beckie is the only member of her family born in the United States. Her parents are Canadian, and her three older siblings were all born in Canada. She grew up in Colorado but spent plenty of summers and holidays north of the border, playing soccer in both countries.

She started playing for U.S. national teams as a teenager, starting with the U-18 team and moving to the U-20 team. The competition got stiffer as the 2012 U-20 Women's World Cup approached, and she realized the likelihood of her making the team wasn't good.

At that point one of her coaches called a friend, the coach of the U-20 Canadian team, and told him about this dual citizen who was a dynamic forward. Coach Andrew Olivieri called Beckie and said he'd like to bring her to Canada for a camp. No strings attached, he told her; if she liked it, great, if not, she could head back to the States.

"I went up there and just loved it," Beckie said. "I loved the girls, I loved the staff, I liked the way they ran the program."

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She played in the U-20 Women's World Cup, having a breakout tournament not only in front of Olivieri but also John Herdman, the senior team coach who was at all the games. After the Women's World Cup he invited her to a senior team camp, where she would take the field against Sweden.

That left Beckie with a difficult choice. Playing international soccer had been a goal for years. However, the rules of international soccer did not allow players to switch countries after getting a cap (making an appearance in a game) with another country. If she played this game with Canada, she could not play for the United States.

Texas Tech soccer coach Tom Stone, who is an advanced scout for the U.S. women's team, talked to his star forward. He thought she could succeed in the United States, but he didn't see the passion for her game there.

"I had to be on Janine's team first," he said. "I could tell the Canadian coaches saw in her what we saw in her."

In the back of her mind, Beckie knew what she wanted to do, but she still talked it out. She knew, looking at the perennially top-ranked [U.S. Women's National Team](#), that she likely wouldn't make the U.S. roster for several years, which would shorten her international career. But she wanted some assurance from the Canadian coaches first. After some poking and prodding, she got it.

"John said, 'We're committed to you for the long run if you're committed to giving us everything,'" Beckie said.

A short while later she suited up for Canada and took the field against Sweden. She continued training with the team between her seasons at Texas Tech, and in the spring of 2015 moved to Vancouver for six months for residency and training, always with the Women's World Cup on the horizon.

### **Getting ready for the world stage**

Beckie's training in Vancouver didn't provide the results for which she'd hoped. She missed a month after spraining her ankle and suffered a concussion the same week she came back. Her level of fitness dropped, she wasn't taking the necessary risks to be her best and Beckie knew she wasn't ready for the tournament.

That didn't make getting cut from the team right before the 2015 Women's World Cup any easier.

"I sat down with John and the staff, and he said, 'I know how bad you want this, but we feel like you're not ready right now. We have to take a roster that's ready to win a championship,'" she remembered. "It was really hard at first, just because I had sacrificed so much. I pushed getting my degree back so far; I left the team here at Texas Tech."

That she wasn't going to the Women's World Cup wasn't the only news Herdman gave her, though. The coach told her this wasn't the end of her international soccer career, gave her some things to work on and said he wanted her on the roster for the Pan American



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Games later that summer. Canada fielded a young team in that tournament, allowing Beckie to step up as a leader. They played senior-level teams and Beckie had a good tournament.

“I think that’s kind of where I changed gears a little bit,” she said. “It changed my mentality, and then I came back here for the fall, I had a really fun senior year, we won a championship. It was awesome.”

Stone saw the difference in Beckie when she returned to Lubbock for her final season. Getting cut from the Canadian team may have been the best thing for her soccer career, which up to that point had come fairly easily, he said. She’d always been a starter, she’d always been a leader, she’d always been her coach’s go-to player.

“Although it hurt her not to be selected, I think it emboldened her, put a chip on her shoulder that helped her when the next opportunity came around,” he said. “At the absolute top of the sport, she learned the hard way it’s a small variance that separates those who make the team and those who don’t.”

The two had a long talk before the 2015 season. Stone told Beckie if she wanted to make the Olympic team, she needed to forget about it and go all in for Texas Tech – make her collegiate team as successful as possible, and Canada would take notice.

She did. They did. She went to the post-World Cup Canada Soccer camp, playing with more confidence, determined to be on the Olympic roster. She hit her first mark when Herdman put her on the roster for the Olympic qualifying tournament in Houston. The team qualified, but Beckie left disappointed, having logged just a few minutes of playing time without making much of an impact.

But she kept putting in the time at camps, leading to two goals in the Algarve Cup in March, when Canada beat Brazil for the championship. She scored in a game in the Netherlands and played all 90 minutes in a home game against Brazil earlier this summer, then came the moment when Herdman selected his 18-woman roster. That conversation in his office went much better than the last one.

“Watching her grow was one of the more satisfying experiences that I’ve ever had as a coach,” Stone said. “You’d be hard-pressed to find someone who worked more on developing her game than Janine Beckie did over the course of her career so far.”

### **Road to Rio**

Beckie finished her collegiate career as the all-time leading scorer for Texas Tech. She was the first Red Raider to win Big 12 Offensive Player of the Year, she was a two-time semifinalist for the MAC Hermann Trophy recognizing the top collegiate player, and she led the team to its first Big 12 championship before being drafted eighth by the Houston Dash in the National Women’s Soccer League in January.

She made a few fans in her time here.

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“The amount of support that I have purely from people in Lubbock has just been unreal,” she said. “It’s really cool to see such a Red Raider family here. It’s overwhelming to see how much support there is anytime something big happens.”

The support continued in her move to Houston, which is a great place to train for high-level competition in hot and humid cities. She is one of seven Dash starters going to Rio. The NWSL actually shut down in August, since so many players from its clubs are at the Olympics, and Beckie missed five games in July while training with Canada. The clubs just know it’s coming and know how to work with international programs by now.

Becoming a professional has been a difficult transition, Beckie said. She’s playing in a new city with a new team and new players, all of whom were standouts in their collegiate careers, which means the game changed significantly, too. Of the seven Dash players in Rio, two are World Cup champions and one of those, forward Carli Lloyd, is the international soccer federation’s World Player of the Year. The pressure is on all the time. Plus, this is how Beckie pays the bills.

“This is my job now,” she said. “It’s what I’m getting paid to do. It’s a full-time thing – different than being in school, playing for your school, which has been the best thing in my life.

“But it’s super exciting. Just to train in such a high-level environment every day and to play with such high-level players every day has been really cool. And there aren’t many people who get to say they play a sport for a living. I’m still kind of basking in that reality.”

The other reality, that she is an Olympian, didn’t hit until she was buckling up on a Brazil-bound plane. With Canada’s first game on Wednesday (Aug. 3) in São Paulo, she’s excited to showcase her team and their potential.

“I’m most looking forward to how good our team’s going to be, and I say that with complete confidence,” Beckie said. “I think people are going to be really surprised with what they see from us. “Canada’s always been the gritty, strong fighter type soccer team, but John’s really come in in the last four years and shifted the team to be a more technical side with more talented soccer players and not just pure athletes.

“It’s a really good mix of veterans and new faces, and I think people are going to be really surprised by the quality of soccer that we play.”

She’s also excited to don the colors, sing the national anthem and represent her country. Well, one of her countries.

“It’s a bit different for me because I grew up in the States, but I visited family my entire life in Canada and always felt like that was really my country,” Beckie said. “At the same time, I have so much American pride as well so it’s a weird balance. I play in an American league, I went to school here, I grew up here. But I feel a lot of pride and honor wearing my family’s colors, a place where my entire family has lived their entire lives. It’s just a place with truly amazing people and a culture that’s unmatched.



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“It’s just been a blessing the past two years to play for them and I hope this is just the start of a long career,” she stopped to laugh, “if my body lets me play for the next 10 years.”



# Web Only

## **Progress, But Not Equity: A Look at the Gender Equity Council at Texas Tech**

The President's Gender Equity Council studies issues related to gender and sexual orientation and recommends changes to make Texas Tech friendlier to these groups.

By Heidi Toth

In August 1971, Judi Henry left her hometown of Lovington, New Mexico, for the big-city life of Lubbock, enrolling at the newly minted Texas Tech University.

Also in August 1971, the United States celebrated the first Women's Equality Day – Aug. 26, the anniversary of the day in 1920 the 19<sup>th</sup> Amendment was certified, giving women the right to vote.

It's been 35 years. Henry has stuck with her alma mater, earning a doctorate in education and working as dean of students before becoming the senior women's administrator in athletics. Equality for women has been less linear – progressing in fits and starts, with women still lagging in pay equity, promotions and management opportunities, even in higher education.

Texas Tech, while struggling with many of these issues, is proactively looking for solutions, led in part by the [President's Gender Equity Council](#). This council, of which Henry is a longtime member, works to provide support and a voice for women and the LGBTQ community on campus, who remain underrepresented at the highest levels.

"I'm optimistic right now," said Elizabeth Sharp, chairwoman of the council. "I think we're living in a time when more and more people are starting to speak out; they know things are not equal."

### **The past**

When Henry was in Student Affairs in the 1990s, she and the director of Women's Studies worked with then-president Donald Haragan to create a committee focused on preventing sexual harassment. That morphed into a provost's committee on gender, with Charlotte Dunham, director of Women's Studies, completing a survey on Texas Tech's performance in terms of gender equity.

"It's what you expect, what you find in most major universities: women clustered in the lower ranks, with lower salaries, even after controlling for time and rank," she said. "There was clearly a need. It clearly wasn't equity."

That report included a recommendation that a standing committee be appointed and given resources to address gender equity. In 2004 the President's Gender Equity Council was created, with Dunham as the first chairwoman. Sociology professor Martha Smithey

succeeded Dunham, and Sharp, associate professor of human development and family studies, took over as chair in 2014.

While the activities of the Gender Equity Council have shifted in the last decade, the focus on employment, climate and family have remained central to its mission. Although committees took on major issues that affect the entire university and culture, they also looked at ways to help individual women succeed. Sharp, who was a member of the committee before she was chair, was part of the family committee that documented the need for mother-friendly rooms throughout campus.

Henry remembers the early days when male and female athletes were in separate departments and appreciates seeing the university adapt as the council did.

“What’s neat about it is it grew into something bigger,” Henry said. “I don’t think the goal became accomplished, but the mission became broader and more encompassing.”

### **The present**

When Henry started working, both in Student Affairs and athletics, she was the only woman. At a recent meeting of senior athletics administrators, it was about even.

“You’re beginning to see some recognition of diversity in leadership teams,” she said. “We’re beginning to see small increases in women and minorities in upper-level administration. Part of that is a matter of the fact that we’re behind in history and it takes time to make up for that lag.”

“I’ve seen progress, but it’s not equity,” Dunham added. “There’s been some progress, and there’s been some going backwards.”

That improvement has come in the form of salary, more women in administrative positions and in typically male-dominated fields like business and engineering.

“One of our best features is we work really well with several entities at Texas Tech that are already doing amazing things,” Sharp said.

Sharp, who is in her third year as chairwoman of the council, pointed to a number of developments the Gender Equity Council has implemented. Last fall she and several others organized the [Women Faculty Writing Program](#), which is designed to help female professors set aside time every week for research, writing and publications. Research is critical for tenure-track professors, but often it is pushed aside by other needs, especially by female professors. This has resulted in fewer female professors promoted nationwide.

She also highlighted the Women’s Leadership Institute, a program for undergraduate students. These women are already leaders, and the institute, now starting its third year, allows them to network with each other and other women leaders, such as Marsha Sharp, the legendary Texas Tech women’s basketball coach, hone their leadership skills and access opportunities they may not have otherwise had.

The institute also is planning a conference for Texas Tech women undergraduate students and local high school girls and will invite similar leadership institutes from universities



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throughout the country. While the conference will take place in April and has not been finalized yet, Elizabeth Sharp said it will include workshops about leadership and negotiation and opportunities to see what women's leadership institutes at other universities are doing.

"It appears there are growing numbers of women leadership institutes at universities responding to large inequity issues," she said. "We see gender disparities really intensely with leadership roles."

To that end, when Texas Tech University System vice chancellor John Opperman was interim president at Texas Tech earlier this year, he signed the [Moving the Needle pledge](#), a national campaign to achieve the goal of women making up half of the country's college and university upper-level administrators. President Lawrence Schovanec, who continues to be a staunch advocate for the Gender Equity Council, is upholding that commitment as well.

"It is the responsibility of administrators, faculty, students and staff to proactively support an environment of gender equality," Schovanec said. "I am encouraged by progress made at Texas Tech, but we must continue to work to ensure an equitable and inclusive environment for all."

### **The future**

How is Texas Tech doing?

This question, posed to Dunham, is met by a pause, then a long sigh.

"We're trying," she said at last. "Can I say that? We're trying. Climate is really hard to change, but improving representation of women is going to help that."

Sharp worries society at large looks around, sees Hillary Clinton running for president, female athletes having the big storylines at the Rio Olympics and women running a few Fortune 500 companies and believe the United States offers equal opportunities to everyone.

"The assumption is we're there. We've achieved it," she said. "Really, a lot of people believe everything is already equal socially, economically, politically. Unfortunately, if we look at the data, that is inaccurate on almost every level."

The good news that each woman echoed is that she is hopeful for the future. Again, Sharp is optimistic – more people are paying attention to sexism, gender equality, sexual assault and the gender pay gap. Texas Tech, just by having the Gender Equity Council, groups for women staff, faculty and students and supportive administrators, may be above average.

"I like to think Texas Tech is making great strides," Sharp said. "Other university councils are amazed at how much we're doing. We're also at a great time right now inasmuch as there's just wider public realization that, 'oh, maybe everything's not equal.'"

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Henry also emphasized the importance of including men in the march toward gender equity. She mentioned Haragan and then-vice president of student affairs Robert Ewalt in the committee's early days and the support of Schovanec and Juan Muñoz, senior vice president for [Institutional Diversity, Equity and Community Engagement](#) and vice provost for Undergraduate Education and Student Affairs.

Dunham, as she considers the future of gender equity in higher education, takes comfort in data, which does seem to demonstrate a continued march, however slow, toward that goal. She's not sure the women of her generation will overcome the inequity they faced early in their careers, but she's more optimistic about women entering higher education now.

"Research shows when a department reaches a critical mass of women, that's when you see real change," she said. "As more and more programs get to that critical mass – and it doesn't have to be half – I think that's going to be a good thing."

Sidebar: Tools and resources

Women's Staff Professional Network

[Women's Faculty Writing Program](#)

[Women's Leadership Institute](#)

[Syllabus statement for Title IX](#)

[Title IX outreach series on sexual violence](#)

[Resources for LGBTQ community](#)

[President's Excellence in Gender Equity Awards](#)



# Web Only

## **Six Things First-Year Students Must Experience This Semester**

From football games to eating at the StrEat food truck, the fall semester is filled with experiences every Red Raider should have.

By K'Leigh Sims

With campus bustling with students this first week of class, first-year students might find the sheer amount of activities available to them a little overwhelming. So we've narrowed down the list to six things first-year students, both freshmen and transfers, must do to experience Texas Tech at its absolute best.

### **Cheer on the Red Raiders at a Texas Tech football game**

There's no better place to be on a Saturday than at Jones AT&T Stadium for a Red Raider football game. The [Masked Rider](#) runs across the field with power and grace, the [Goin' Band from Raiderland](#) performs the coolest halftime shows, and the proud chanting of "Raider Power!" sends chills down your spine every time as thousands of fans cheer on the scarlet and black.

Before every home game, students can participate in [RaiderGate](#) – Texas Tech's official student tailgating section in the R1 parking lot behind the Chemistry building – where almost 10,000 students get pumped up for Red Raider football, listen to live bands and have fun with friends.

### **Explore art exhibits at the First Friday Art Trail**

Just a few miles east of campus in the Lubbock Cultural District is the First Friday Art Trail, a free, self-guided public art event that brings together collectors, artists and the community for an evening of art, music and fun from 6-9 p.m. on the first Friday of each month. Students can grab a map and explore the trail through the official venues (one of them being the [Museum of Texas Tech University](#)) for an ever-changing array of art exhibits or hop onto one of five free First Friday trolleys and ride to the galleries along the downtown route. To see the venues, visit the First Friday Art Trail [website](#).

### **Welcome back Texas Tech alumni during homecoming week**

In the middle of the semester is one of the best weeks of fall: Texas Tech homecoming. As we welcome back alumni and crown a new homecoming king and queen, Student Union and Activities offers events every day of the week leading up to the big game, including the homecoming parade, Rowdy Raider Rally, the bonfire, pep rally and more. The whole week is dedicated to school spirit while having fun with your friends.

This year's homecoming week occurs Oct. 10-15. To see the schedule of events, visit the Student Union and Activities [website](#).



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### **Eat at the StrEat food truck**

In a hurry for lunch between classes? Stop by the StrEat food truck for creative, unique food choices like a Bar-ba-Bacon StrEat taco, corn hash or churro chips for dessert. The food truck serves lunch from 11 a.m. to 2 p.m. at various locations around campus and offers vegetarian and gluten-free options. Students can use their dining plan or Raider card to purchase food at StrEat in addition to cash, check and credit cards.

StrEat is just one of many unique eateries scattered across campus. To see a full list of dining locations, visit Hospitality Services' [website](#).

### **Float on the 645-foot lazy river at the leisure pool**

Before the summer season dwindles, students can take a break from classes and float on the 645-foot lazy river at the leisure pool. Located at the [Robert H. Ewalt Student Recreation Center](#), the leisure pool has been ranked as one of the nation's best campus pools and as one of the best extras on campus. In addition to the lazy river, the leisure pool has an eight-lane lap pool, 25-person hot tub, diving well and a wet deck for tanning where students can relax.

To see the hours of operation, visit the Rec Sports [website](#).

### **See campus light up for the holidays at Carol of Lights®**

The fall semester wouldn't be complete without one of Texas Tech's largest and oldest traditions: Carol of Lights. The event kicks off the holiday season the Red Raider way with a celebration that includes more than 25,000 red, orange and white lights that illuminate 13 buildings on campus. Throw in the carols sung by the Texas Tech choirs; hot chocolate; a 38-foot-tall Christmas tree; a torch-light procession by the Masked Rider, Saddle Tramps and High Riders; a 20-foot wreath made of fresh cut pine limbs on the Geosciences building; and 3,000 luminaries placed around Memorial Circle, and it's definitely a Raiderland tradition you don't want to miss.

Sponsored by the Texas Tech Residence Halls Association, preparation for the event begins in late September. Physical Plant employees begin stringing all of the lights on the buildings surrounding Memorial Circle. The lights are all connected together and are turned on by the flip of a switch at the Carol of Lights celebration.

This year's 58<sup>th</sup> annual Carol of Lights will take place Dec. 2. For more history and facts about the tradition, visit the Carol of Lights [website](#).



# Web Only

## **Sprinter Gil Roberts Has Run Bumpy Road to the 2016 Olympic Games**

After recurring injuries and a near-disqualification in the trials,  
the Texas Tech alumnus is ready to represent the United States.

By Glenys Young

Gil Roberts remembers watching the Olympics as a child. He was blown away by the athletes he saw on television and yearned to compete at that level. Now, two decades later, the 27-year-old is getting his chance.

Roberts, a Texas Tech University alumnus and former track and field All-American, is headed to Rio de Janeiro to compete in the Olympics.

“Michael Johnson was somebody I really respected,” Roberts said. “He was the ultimate champion, the ultimate competitor, and I always hoped to be like him one day. Obviously I haven’t reached that level yet, but hopefully I can do some special things.”

### **Red Raider runner**

Johnson, holder of four Olympic gold medals, is the only man to win both the 200-meter and 400-meter dash events at the same Olympics – a feat he achieved in 1996 in Atlanta. To this day, he holds the world and Olympic records in the 400-meter. Like his idol, Roberts focused on the longer race.

“It’s always been my main event,” Roberts said. “I’ve always tried to focus the most on the 400-meter – it’s a passion of mine. It’s always been like a child to me; I’ve been nurturing it since the start of my career.”

An Oklahoma City native, Roberts ran track for Millwood High School. In his first 400-meter race under the International Association of Athletics Federations (IAAF), the soon-to-be junior recorded a time of 47.47 seconds on July 3, 2005. By summer 2007, the recent high school graduate had improved his time to 46.16 – a good sign for Texas Tech, where Roberts had signed and passed on opportunities from other powerhouse programs recruiting him: Louisiana State, Florida State, Baylor, Florida and Oklahoma.

“I recruited Gil out of high school,” said Texas Tech track and field head coach Wes Kittley. “I saw him run at the state track meet his senior year and just really thought he was an outstanding runner. We got him on a visit and put a little pressure on him to sign, and we got him signed. I felt really fortunate to beat out a lot of big schools because I knew he had the potential to be great.”

Despite a disappointing freshman year, in which recurring hamstring injuries held him back, Roberts had a No. 1 national ranking as a sophomore. In 2009, Lubbock hosted the Big 12 outdoor track and field championships for the first time, and at that time, Baylor

had won the men's 400-meter in every Big 12 championship since 2000. Roberts put an end to that streak, running a school-record 44.86 – the fourth-fastest time in the world that year. His time was faster than those of three Olympic medalists who ran the same track only 10 days earlier. Roberts recalled it as his favorite moment competing at Texas Tech.

“It’s kind of indescribable,” he said. “Obviously I felt relief and happiness that I won, but it was more than that. It let me know that I could be something special in the 400-meter in the United States and even the world. Once you start at the 44-second range, you start to separate yourself in another league. It kind of allowed me to elevate my career.

“It was a great feeling: just one of those races that turned out perfect. Everything was executed properly, and coach Kittley had me ready. I knew what I needed to do, and it was special for me because I got to share that with Texas Tech fans and everybody from Lubbock.”

In March 2012, he won a gold medal at the IAAF World Championships, running the anchor leg on the American men's 4x400-meter relay team. Just two weeks earlier, he'd won the 400-meter title at the U.S. Indoor Championships. But injuries plagued him through the late-spring outdoor season.

“He was very muscular and I think that was some of the problem with his recurring injuries – he was very inflexible, so that’s what we worked on the most, trying to improve his flexibility,” Kittley said. “He was always really strong – we did get him stronger, but his strength is his greatest asset, probably – and he has really good speed. So he had speed and strength, now we had to work on his flexibility, and I think that’s where we improved it the most.”

The six-time All-American, who held four of the top five school records, graduated in May 2012 with a degree in sociology, but he was already looking ahead.

### **Olympic trials and tribulations**

In late June 2012, Roberts found himself at the Olympic trials in the 400-meter semifinal race. For the first half, he was among the leaders. But he faded in the last leg.

“He’s had kind of an up-and-down career because of injuries, but when he’s healthy, he is really good,” Kittley said. “He has a tendency to go way too hard. He’s very aggressive. You’ve got to run fast but you’ve got to be under control, and he gets a little excited at times. He’s the best I’ve ever had, as a coach, who can run rounds hard every time, but if you make three rounds, by that third round if you’ve really extended yourself in the first two, it does come back to bite you a little bit.”

Roberts finished 12th, missing out on his dream of representing the United States in the 2012 Olympics.

His journey wasn't over, though. He continued training, and two years later, in June 2014, Roberts took home the gold medal from the U.S. Track and Field Championships with a time of 44.53. He tied for the fifth-fastest time in the world for the 2014 outdoor season and set a new career-best for himself. He knew he still had a chance.



## TEXAS TECH UNIVERSITY

Fast forward to July 2, 2016, the semifinal 400-meter race at the Olympic trials. Charged with a false start, Roberts initially was disqualified, but he was allowed to run the race under protest.

“I was devastated for him because I thought he probably did jump; I didn’t know right off the bat,” Kittley said. “But at a meet of that caliber, they have electronic starting blocks. If it’s a 0.1 or less than 0.1, then they assume you guessed at the gun; they believe no human can start faster than that. He ran under protest – they allow you to do that – but I assumed he was going to get disqualified at the end of the race. But when they checked it, it was above 0.1, so they gave him the benefit of the doubt.

“The false start wasn’t called because of the blocks – they have a light that goes off and says you did it – a person called it. He thought Gil timed it too good. The good thing about those blocks being electronically synchronized is it proved he didn’t jump. It was close, but he got by.”

Roberts crossed the finish line second and USA Track & Field officials ruled in his favor two hours later, reinstating him in the competition.

“I was thrilled because he ran so good,” Kittley said. “He’d run the round before that so good. I knew he had a great chance to make the Olympic team, and missing that opportunity would have just been awful. I cannot imagine how he felt thinking he jumped and still having to run that race knowing he’s probably disqualified. With the emotions, what’s going through his head, I was so proud of him for being able to keep his composure and put it out of his mind and go for it and say, ‘whatever happens, happens.’ But I’m sure he thought he was probably out.”

In the finals the next day – 11 years to the day since his first IAAF race – Roberts was the fastest out of the blocks. He set the pace and led for much of the race. Two-time Olympic gold medalist LaShawn Merritt eked out a first-place finish in 43.97 seconds, but Roberts came in second place at 44.73, punching his long-awaited ticket to the Olympic Games.

“When I came across the line, my initial thought was a weight had been lifted off my shoulders,” he said. “‘Thank God, I’m going to be living my dream!’ For me to be able to qualify for the United States, the hardest team in the world, it’s special to me. It’s only half the journey, journey’s not over yet, but a lot of pressure left.

“I felt great, I’m the fastest I’ve been in my life and the strongest stamina-wise; I’m in great shape,” Roberts said. “I worked extremely hard to make it to the Olympics this year. I was confident in my training and all the work I’ve put in. I had faith in God that he would allow me to run like I knew I was capable of running.”

### **Training**

Since graduating from Texas Tech, Roberts has been competing professionally for Nike and training in Los Angeles.

“My coach has me do different things: sometimes 200 meters, sometimes 300 meters. It’s all over the place with my workouts,” he said. “He doesn’t let me get accustomed to anything. He likes to test my fitness and speed, so we switch it up quite a bit. I pretty much train every day except Sundays.”

In addition to the 400-meter, Roberts is one of six athletes who USA Track & Field could include in the four-man 4x400-meter relay. But facing the world’s best athletes on its biggest stage, he said he can’t focus on his competitors.

“I’m back into training, focusing and trying to figure out each phase of my race so I can go out there and give the best performance I can possibly give,” he said. “I can’t get caught up in how they’re running; if I run my race I should be in good shape.”

Kittley said although Roberts probably isn’t picked to win, anything can happen in the Olympics.

“Our other American, Merritt, beat him fairly soundly in the trials race, so I think Merritt has a little bit up on him, but I think if Gil will pace himself better, I do think he’s got a great chance of getting a medal, getting on the stand in the top three,” Kittley said.

“I’m just really proud of him. Gil’s had an up-and-down career, and he has just seemed to really persevere and not let it get him down to the point that it’s been destructive. That says a lot because you go through so much disappointment, it’s easy to give up, and he never has had that spirit about him. I’ve always known he’s talented and can do it, but the mindset has to be there also.”

Roberts said he can’t predict how he’ll feel at the moment of competition, but he’s certainly thankful now.

“It’s been a dream of mine my entire life,” he said. “Watching the Olympics growing up with my mother, my father and my brother, we always tuned in and watched it. It’s a dream come true for me to get to go to Rio and compete for my country. Nothing is better than getting to compete for the country you love. It’s way bigger than me.”

The first round of the men’s 400-meter is scheduled to air at 6:20 p.m. CT Friday (Aug. 12) on NBC. The semifinals will air at 6 p.m. Saturday (Aug. 13) and the finals at 6:15 p.m. Sunday (Aug. 14).



# Web Only

## **Teenager Creates System to Reduce Concussions Among Football Players**

Berto Garcia, who will start his second year at Texas Tech, created the system in high school for a science fair project. He now has a provisional patent. He's 19.

By Heidi Toth

Woodpeckers. Long-horned rams. American football players.

They all have one major thing in common: frequent, repeated blows to the head.

Humans, however, seem to have a weakness not shared by the animals: they are more likely to suffer brain injuries from these impacts.

"Why is it that none of these animals actually sustain any brain injury?" asked Alberto Garcia, an incoming sophomore at Texas Tech University.

He came across this phenomenon as a sophomore at Olton High School while working on his science fair project, which aimed to reduce concussions among football players. In his research he learned that, despite repeated impact to the head from trees or charging rams, studies found little evidence of brain damage in either woodpeckers or rams.

As he kept reading, Garcia learned both of these animals have natural stabilizers around their necks, which keeps their heads from whipping front and back on impact. Humans, without such stabilizers, suffered repeated impacts from this whiplash motion after the initial impact, which contributed to brain damage.

This research led him to create a helmet-and-shoulder pads system with a microcontroller that he programmed to stabilize the head immediately after impact, eventually catching the attention of the U.S. military and national engineering organizations when he presented it at an international science and engineering fair.

Keep in mind: All of this was before he graduated from high school. Even the mentor who started Garcia on the path had no idea what was coming.

"When he showed me his project I was just floored," said Elias Perez, a science teacher at Olton and Garcia's mentor. "I've never seen anything that sophisticated come from a high school student."

### **Becoming an innovator**

Garcia grew up wanting to be a surgeon.

"That quickly changed at the age of 10 when I started taking apart my parents' VCR," he said. "The DVD player was after that. Every TV we would throw away, I would take it



apart, take out all the components and see how it functioned. If I couldn't fix it, I would just admire it."

His parents, however, knew medical school wasn't in their son's future.

"Since he was small I could see that he liked to take apart the VCRs and the TVs and the radios, and I knew he was going to end up going for something that had to do with electrical engineering or something in that field," his mother, Esperanza, said. "I just saw him as a little tornado that would tear things apart.

"He would take them apart, and in the end he wouldn't fix anything but he would still have fun."

Even with that love of electronics, Garcia didn't spend much time inside. In high school he played all the sports he could and was proud to call himself an athlete. He wasn't on the science and engineering team when Perez suggested he enter the science fair. Garcia thought about it, then came up with one idea: harnessing energy from magnetic fields.

Or, Perez suggested, he could look into a topic a little closer to home. They talked about football and the concussion Garcia suffered just a couple of weeks prior. He decided to look at ways to reduce concussions among football players and started with the basic research.

As he read about concussions, Garcia learned two types of motion, linear and rotational, contribute to concussions. Linear acceleration force comes from the direct impact. The rotational acceleration motion is the whiplash motion of the neck and rotation of the head and neck, which caused the brain to continue bouncing off the skull after the initial impact.

"Rotational acceleration forces were more of a key aspect in this case," Garcia said. "They played a larger role in concussions than the linear acceleration forces."

Armed with the knowledge of this complicating factor, he looked at what a concussion-reducing helmet would need to do. First, it needed to deflect as much of the initial impact away from the head as possible. Second, it needed to reduce that whiplash motion. Third, it needed to be small and agile enough that football players could still play football while wearing it. If it was too bulky or stiff to allow movement, it would never make it onto the football field.

This is a tough problem for experienced engineers; for a 16-year-old without any computer programming experience and not much in the way of funding or free time it seemed almost insurmountable. But Garcia plowed ahead, eventually creating a prototype that is a combination of detachable helmet and shoulder pads with stabilizers around the neck. The stabilizers are controlled by a microcontroller made by Arduino and are attached to sensors in the helmet.

When the person suffers a hit above a certain threshold, the microprocessor activates the stabilizers, which locks the helmet into place. It doesn't stop the impact of the initial hit, but it keeps the head from rattling around inside the helmet after the hit.



“If you reduce the whiplash motion of the neck, then you can reduce the odds of receiving a spinal cord or neck injury because all that energy is dispersed into the stabilizers,” Garcia said.

The system weighs five pounds, so it’s not unduly heavy. The sensors also can measure the amount of force with which athletes are hit and, using a radio, can transmit that data to trainers on the sideline. Knowing that could help health care professionals diagnose concussions more accurately, he said.

At the time of his first science fair, though, all of this was in his head. Garcia hadn’t built any of it by the science fair that year. He presented his hypothesis, research and theory to the judges with the prototype noticeably absent.

The theory was good enough for a silver at the regional science fair. That qualified him for the state science fair, but not for the Intel International Science and Engineering Fair, the competition he had his eye on. The disappointment didn’t end there; he came home with nothing from the state science fair as well. No awards, anyway.

“I think that was the driving force,” Perez said. “He said, ‘You know what? I can win.’ When he never heard his name called at the state competition, at that point forward I knew he was going to be able to do great things.”

### **Returning to the science fair**

At the end of that school year Garcia’s family moved to Shallowater, which didn’t have a science and research design team. It wasn’t until his senior year that Leslie Griffis, his physics teacher, told him the school was willing to pay for his entrance into the regional fair. He still wouldn’t have a team, but he could enter. Since he needed to do a senior project, he picked up his concussion-reducing device where he’d left off two years earlier.

Garcia worked on his project in class and stayed up late. He rummaged through his garage and surfed Amazon looking for parts that would fit into the helmet-shoulder pad combo, including part of his father’s lawnmower. He went to junkyards and bought used parts. He dropped football and spent all of his free time, and much of the time he should have been sleeping, working on his invention.

“There was literally one night I stayed up ‘til three in the morning and I just yelled out ‘yes!’ and I fell back into my chair in the kitchen,” Garcia said. “My mom came into the kitchen and said, ‘What’s wrong with you?’ I said, ‘I finally figured it out.’ It was that breakthrough moment when everything was working smoothly and perfectly and I was ready for the competition.”

The arduous part of the process was programming the Arduino, an open-source microcontroller that he learned to program through trial and error, looking up code online and combing through each line looking for mistakes. He burned through three of them by the end of his senior year, at which point he still hadn’t taken a computer programming class.

“I didn’t learn until I actually got to physically hold one,” Garcia said. “I had to read through the instruction booklet. It wasn’t an easy journey from not knowing anything to actually programming it.”

The day of the regional science fair arrived, and Garcia nervously waited at the United Supermarkets Arena on the Texas Tech campus. He needed to win gold to qualify for the Intel fair.

“They called out bronze, they called out silver,” he said. “I thought, ‘well, there’s no way I can’t get this.’ I was really hoping I got the gold medal, but really worried that I hadn’t gotten bronze or silver, which at that point I may have been content with.”

Then he heard his name announced as the gold medal winner.

“I was literally on the verge of tears walking up there because every night I was working on the project, and after getting frustrated or bored I would watch past Intel winners get announced and see them go up there, the scholarships and all the opportunities they got. It was just very exciting, and I thought, ‘well, I want to get there.’”

He also attracted someone else’s attention that day. Michael San Francisco, dean of the [Honors College](#) at Texas Tech, was a judge at the science fair. He chatted with Garcia and suggested he consult with local engineers for ideas on where to take his system.

“He had this passion for his research,” San Francisco said. “The fact that he could take his concept and put all the parts together – the mechanical parts, the electrical components and then also make it into an ergonomically usable device – all of that takes some forethought. For someone to do that as a sophomore or junior in high school is very commendable.”

### **At the international science fair**

The Intel International Science and Engineering Fair is a little bit like the Olympics for teenage innovators, right down to exchanging pins. More than 1,700 students representing more than 70 countries attended the fair. He filled a Pittsburgh Pirates towel with pins from dozens of students.

That was day one. The next four days were “down to business,” Garcia said.

“Just walking into the room you could feel how competitive it was,” he said.

On his first day he talked to 10 judges, explaining each time about his research into whiplash motion, the hours he spent reprogramming the microcontroller and the number of times he tried the helmet and shoulder pads on, then made tweaks to the design. It wasn’t quite done and the judges had some critiques, but Garcia got the feeling they liked it.

The next day was media day. Garcia stood by his project watching reporters move from table to table, asking about the projects that likely would win. He got increasingly worried as the day went on and no reporters came to his table.



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“I saw them going around me to interview other students,” he said. “I thought it wasn’t my moment, but they finally came around to me 20 minutes before media day was over. I had four to five stations lined up back to back.”

Day three was a ceremony for special awards and scholarships. Garcia received scholarships from the Society of Experimental Mechanics and the Office of Naval Research. The final day in Pittsburgh was the official award ceremony. After what seemed like a terminal wait, his category came up. He was praying – praying to hear his name called, praying he was in first place.

“I’m looking for first, and they call my name – third place,” Garcia said. “I sit there for a minute and think about everything. ... At that time I didn’t keep in mind the amazing opportunity that I had to go up there and get the award. I was sad about getting third, but afterward I realized I was third in the entire world.”

He called his parents and Perez to tell them the news. Esperanza cried, then called of their family to tell them her son won this award and was on the news. His father, Jose, told his oldest son how proud he was of him, then told Garcia’s younger brother, “Your brother is No. 1, *mijo*.”

“He said, ‘I know my brother is No. 1, so I’ll be better than him,’” Jose remembered with a laugh.

Perez also wasn’t disappointed in Garcia’s third-place finish. He saw this as the first measure of success for his protégé, and he expects even more.

“That’s the ultimate goal, to find something you’re passionate about and then find success in that,” he said.

### **Texas Tech and beyond**

Garcia is a West Texan, but for a while he wasn’t keen on sticking around. His father said when Garcia was a junior and looking into colleges, he wanted to get far away from here. Jose worried about him being too far away to help, but he didn’t want to discourage his son because he was afraid he’d lose interest in college altogether. He and Esperanza didn’t go to college, and they wanted their oldest son to be the first.

As the time to decide drew nearer, however, Garcia was drawn to Texas Tech. It felt like home, he said; Garcia came to the campus for years as part of [Upward Bound](#). He’d also been on campus for the science fairs and made connections, including the continued relationship with San Francisco, who invited Garcia to his office one day to visit with Changzhi Li, an associate professor of [electrical and computer engineering](#).

“My impressions of Berto are that he is a very smart student, and it was a pleasure to talk to him,” Li said. “Berto brought his design to Dr. San Francisco’s office, explained to us the design concept and the mechanism of protecting players. We gave him some suggestions regarding improving the presentation. He listened carefully.”

San Francisco also got some scholarship money for Garcia, which made coming to Texas Tech an easier decision. Both he and his parents said it was a blessing for all of them.

“It would have been difficult for us to help him if he would have gone farther away from home, and it would have been difficult for him to help us as well,” Esperanza said. “As much as he needs help from us, we also need help from him at times.”

“Thank God he decided to stay here at Texas Tech,” his father added.

Garcia continues to work on his system, including doing market research to determine its greatest potential. Garcia used the award money from the science and engineering fair to hire a lawyer and register a provisional patent for the smart system; he has a year to decide whether to get a patent.

The Intel fair also gave him ideas on other applications for the system; representatives from the Air Force and Navy thought it had potential for fighter pilots, who are frequently jerked around in their planes, or soldiers on the ground, and an engineer from the automotive industry suggested a use among NASCAR drivers.

Garcia worked with Lisa McDonald with the [Texas Tech Accelerator](#) to determine what he wanted to do with his technology. On one hand, he wants to dive into all these potential uses and work with the experts needed for his system to meet its potential, which would mean starting a business and championing his idea. But he’s also thought about licensing it to another company, letting them handle the testing, research and development, while he focuses on his next great idea.

He’s also looked at related ideas, including a helmet with an accelerometer in it to measure force, which was his final project for his introduction to computer engineering class.

“I just hope it’s a never-ending journey, that I’m able to have a good impact on people’s lives,” he said.

His biggest cheerleaders, who weren’t sure what he was doing when he came home with a microprocessor, anticipate he will.

“I know how hard he’s worked on this project, and I believe all these hours of work and frustration will pay off in the end with the help of God,” Esperanza said. “Hopefully his invention is out there someday saving lives and reducing concussions.”



# Web Only

## **Texas Tech Alumnus Brings Home Long-Anticipated Olympic Gold Medal**

Gil Roberts was part of the men's 4x400-meter relay team in Rio de Janeiro.

By Glenys Young

Taking the baton from teammate Tony McQuay, Gil Roberts only had one thought: "Just go."

And he did.

Completely zoned in, Roberts didn't pay attention to anything or anyone around him for the next 45 seconds. He knew if he did his job, running those 400 meters as fast as he could, his team would be in a good position to win.

After passing the baton to LaShawn Merritt, Roberts pulled up to watch. As Merritt passed the 300-meter mark, Roberts began to celebrate in his head. And when Merritt crossed the finish line – ahead of his competitors – Roberts felt a rush of relief.

"Thank God!" he thought. "I'm going home with a gold medal!"

And with that, Gil Roberts became only the third Texas Tech University alumnus to win an Olympic gold medal.

### **Taking it in**

Roberts' [journey to the Olympics](#) was no picnic. After an up-and-down career hindered by repeated injuries, the former Texas Tech standout and six-time All-American felt lucky just to make the Olympic team in July.

But once he knew he would finally get a chance to achieve his childhood dream of representing his country on the international stage, the 27-year-old was determined to absorb every moment.

Contrary to the media reports heard stateside, Roberts' first impressions of Rio de Janeiro were positive.

"I thought just how beautiful of a city it was," he recalled. "It was my first Olympics, so I'd never been in an Olympic village before, with all the different countries side by side."

The Opening Ceremony was awe-inspiring to be a part of, but it was also interesting on an academic level for Roberts, who got his degree in sociology.

"I don't know how to describe it; it's something I've watched in past Olympics, seeing people walk out, representing their country," Roberts said. "It was a great moment for me,

a moment to just take it in. I wanted to record every moment. My parents told to me enjoy everything, so that's what I tried to do."

### **Falling short**

A week into the Games, Roberts competed in his first event: the individual 400-meter dash. In the first round, he got off to his usual fast start and maintained a good position throughout, placing second at 45.27 seconds and advancing to the semifinals

"I felt good," he said. "I got through by not extending myself too much."

The same strategy, however, didn't work the following night. After another fast start, Roberts was neck-and-neck for second with only 100 meters to go, but fell behind to finish fourth in the heat at 44.65 seconds. It was his best time this season but landed him a ninth-place finish, 0.16 seconds behind the final qualifying spot for the medal race.

"I should have taken off and run it like a final," Roberts said. "I was trying to save up for the final and I didn't even end up making it. It was really hard for me, especially being one spot out."

As disappointed as he was, Roberts still knew he had another shot.

### **Pushing ahead**

From the very beginning, Roberts and Merritt had been told they would run in the final of the men's 4x400-meter relay on Aug. 20. So on Aug. 19, they watched from the sidelines as their teammates Arman Hall, McQuay, Kyle Clemmons and David Verburg finished second in the opening round, less than one-tenth of a second behind the Jamaican team, to advance to the final.

The next night, Roberts knew it was his turn, and he was determined to bring home a medal.

"I said, 'Let's do this; I'm not leaving empty handed,'" he said.

As he watched Hall pass the baton to McQuay, Roberts took a deep breath and cleared his head.

"I've done it time and time again; I've done this my whole life," he said. "You just do your job. You get out and go and do your job."

McQuay had fallen into second place during his leg, but during the baton pass, Roberts took back the lead and Merritt carried it past the line, beating Jamaica by 0.86 seconds.

The euphoria of the moment and the realization of achieving his goal was momentarily too much to process.

"From me being at one of my lowest points after the individual 400-meter to one of my best moments, they were night and day from each other," Roberts said.



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Roberts and his teammates draped American flags around their shoulders for the traditional victory lap around the track.

“I can’t explain how that made me feel,” he said. “I wasn’t tired at all. I could’ve run another 400 meters, as excited as I was at that point.”

Just a short time later, he and his teammates found themselves atop the podium, hearing the national anthem and watching the American flag hoisted toward the sky.

“It was amazing,” Roberts said. “I don’t even know how to really explain it. When you think about that moment, you think, ‘What’s my reaction going to be? Am I going to cry?’ But it was just pure joy; I couldn’t stop smiling. I couldn’t wait to get the medal around my neck. Listening to ‘The Star-Spangled Banner’ and getting to represent my country, it’s nothing but a blessing. It was everything I ever dreamed of, to be honest.”

### **A changed man**

Perhaps the biggest surprise about becoming an Olympic gold medalist is the way Roberts now sees himself.

“With all the support I’ve gotten, from letters I’ve received in the mail from kids writing in, I’ve gotten a sense of my own place as a role model to kids,” he said. “I look at myself and I’m more conscious and careful of the things I do and say, because I see kids looking up to me and watching me.”

The gold medal that now lives on his nightstand is a constant reminder. And even with the added pressure of living up to that gold standard, Roberts certainly is not ruling out another Olympics.

“I think it’s definitely a possibility,” he said, “but it’s all about my health. It always has been. If I’m healthy, I’m good to go. If not, I can’t compete.”

Looking back on the experience, Roberts is grateful it happened, but he’s also grateful the stress is now behind him so he can relax for a little while.

“I’m taking about a week to get my body back and recover, then I’ll start getting ready for the next season and the goals I want to accomplish next year: making the medal stand again at world championships in the individual and 4x400,” he said. “I’ll do what I’ve done this season and continue to get better.”



## SIDEBAR

### **Texas Tech Olympic gold medalists**

1996: Sheryl Swoopes (United States), women's basketball

2000: Sheryl Swoopes (United States), women's basketball

2004: Sheryl Swoopes (United States), women's basketball

2012: Michael Mathieu (Bahamas), 4x400m

2016: Gil Roberts (United States), 4x400m

### **Texas Tech Olympic medalists in track**

2008: Michael Mathieu (Bahamas), silver, 4x400m

2008: Andrae Williams (Bahamas), silver, 4x400m

2008: Shereefa Lloyd (Jamaica), bronze, 4x400m

2012: Michael Mathieu (Bahamas), gold, 4x400m

2012: Sally Kipyego (Kenya), silver, 10,000m

2012: Shereefa Lloyd (Jamaica), bronze, 4x400m

2016: Gil Roberts (United States), gold, 4x400m

2016: Michael Mathieu (Bahamas), bronze, 4x400m

### **Texas Tech's 2016 Olympic medalists**

Gil Roberts (United States), gold, 4x400m

Michael Mathieu (Bahamas), bronze, 4x400m

[Janine Beckie](#) (Canada), bronze, soccer



# Web Only

## **Texas Tech Professor Honored for Economics Blog**

Michael Giberson blog named to Intelligent Economist's top 100 list

By Kristen Barton

The internet allow people to speak to a larger audience than ever before. The ability to create websites for free with little to no coding experience, social media posts reaching thousands of people and simply typing a question into a browser and getting more information has changed the way society distributes information.

One Texas Tech professor is using this to his advantage with his blog "[Knowledge Problem](#)."

Michael Giberson, associate professor of practice in [the Area of Energy, Economics and Law](#) in the [Rawls College of Business Administration](#), co-blogs on the site "Knowledge Problem," which recently was named to the [Top 100 Economists Blogs of 2016](#) list by Intelligent Economist.

Intelligent Economist is a website created by a former University of Southern California student, according to its website. The goal of the blog is simple – to provide easy access and information about economics to anyone.

The top 100 list contains a variety of good blogs, Giberson said. He believes being a part of this list will bring more traffic to the site. Giberson co-blogs on "Knowledge Problem" with Lynne Kiesling, an associate professor of instruction in the Department of Economics at Northwestern University.

Kiesling created "Knowledge Problem" in 2002 and Giberson joined in 2004. He said he did not have a blog of his own and the two connected because of their similar research interests.

"It was a way of diversifying topics and combining interests and outlook," he said. "The blog works in a couple of different ways; it's a good way to document reactions and ideas."

Now, 12 years after Giberson joined the blog, it is one of the best economics blogs in the country.

Prateek Agarwal, owner of the Intelligent Economist, said the blogs on the list are not ranked in order and were chosen based on multiple factors, including popularity, links from other blogs, quality of information, awards received and consistency of posting.

“So in line with that, ‘Knowledge Problem’ was chosen because professor Giberson and professor Kiesling have been writing great posts on energy economics, of which there aren't many other blogs on my list,” he said. “Their writing is accessible to most audiences, and I thought it was an important blog for people to learn about the consequences of energy policy, law and news and the economic impact of those on our environment.”

Giberson said “Knowledge Problem” is a way to turn a couple of posts into a larger article or an essay to be published elsewhere. He uses the blog to tie the news into academia and his research.

In the classroom at Texas Tech, Giberson has assigned “Knowledge Problem” as supplemental reading about topics he has written and is teaching in his classes.

Giberson said he is free to research and look into topics he finds interesting. He is able to use his blog as an informal way of getting feedback and ideas from other academics, which could help him further research a topic and improve his work as a professor.