

hillviews contents No. 2, 2019





COVER STORY

Public Safety

At Texas State University, our research and programs deliver real-world solutions to some of today's most complex safety and security issues.

ABOUT: Hillviews is produced three times a year by the University Acvancement division. We'd love to hear from you. Send us your comments about the articles in this issue, or send story suggestions. Email Hillviews@txstate.edu; or mail to Hillviews, Texas State University, 601 University Drive, San Marcos, TX 78666-4613. Find the latest and past issues of Hillviews caline at hillviews.txstate.edu

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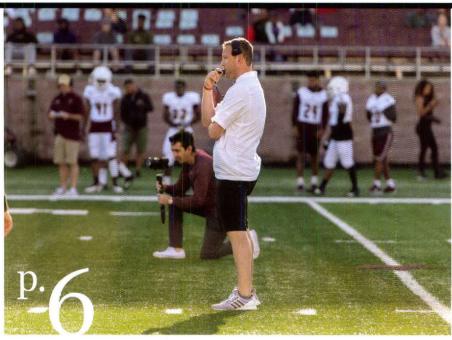
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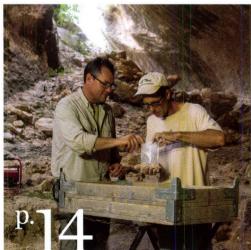
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(from the president's desk)



Dear Friends,

Of the numerous points of pride we hold dear at Texas State, three of the brightest are our boundless innovation, a steadfast commitment to service, and the transformative research conducted by our faculty and graduate students. These defining forces converge to support the nationally-acclaimed work we do in the realm of public safety.

Texas State's programs and research related to public safety connect our expertise to the community on a very personal level. The Advanced Law Enforcement Rapid Response Training (ALERRT) Center at Texas State (featured in the fall 2018 *Hillviews*) is the national standard for active shooter response training. Prompted by the tragic 1999 shooting at Columbine High School, the center opened in 2002 and has trained more than 140,000 first responders from around the world.

In this issue, you'll learn how Texas State's life-changing impact on public safety spans training first responders through the use of virtual reality, developing eye-sensor technology to replace fingerprint sensors in biometric security technology, advancing cybersecurity to protect medical records, and applying the criminal investigation technique of geographic profiling to solve crimes.

Many of the projects have received well-deserved national attention, including Operation Identification (OpID). Led by Dr. Kate Spradley and supported by a team of forensic anthropology students, OpID uses the latest forensic science to identify and repatriate human remains believed to be migrants found in the Texas borderlands.

While several articles in this issue look toward the future, we also pay homage to our Bobcat legacies. Our respected and admired volleyball head coach Karen Chisum reflects on her 41 seasons at Texas State and the experience of taking the 2018 team to the first round of the NCAA tournament. The Strutters, a Texas State tradition and the nation's largest university precision dance team, celebrate six decades of entertaining fans and audiences, and serving as consummate Texas State ambassadors. For 100 years, Texas State bands have brought us to our feet to cheer on athletic teams, or to give a standing ovation for another amazing performance. We've provided a calendar of events planned around the Texas State Bands Centennial Celebration which kicks off in September. You'll also meet our new head football coach Jake Spavital as he forges his own legacy at Texas State.

I am proud of the work our Bobcats are doing to make the world safer and our communities more resilient. We have much to celebrate and much to look forward to at Texas State.

Oexise N. Trauth

Sincerely,

Denise M. Trauth



By Dan P. Goddard

Dr. Craig Hella Johnson, Texas State University School of Music professor of practice, celebrated last spring when Conspirare, the Grammy-winning Austin choral group he founded in 1991, was named a 2019 Texas Medal of Arts winner by the Texas Cultural Trust, joining luminaries such as actor Matthew McConaughey, singer Boz Scaggs, and Broadway star Jennifer Holliday.



"I feel very privileged to be working with Texas State," Johnson says. "The energy and enthusiasm of the students is fantastic. I feel like I'm standing on the shoulders of a lot of good people who have been working on building the university's music programs. I want to continue to expand and innovate, to really stretch the envelope of what's possible in a choral group performance."

Conspirare has been on a national tour performing Johnson's Grammy-nominated three-part oratorio, "Considering Matthew Shepard," a tribute to the young gay University of Wyoming student who died days after being brutally beaten during a 1998 hate crime. Shepard's family invited Conspirare to perform at the remembrance service when his ashes were interred, which took place in October at the National Cathedral in Washington, D.C.

"To be invited to perform at the National Cathedral was incredibly important and moving to us," Johnson says. "Composing 'Considering Matthew Shepard,' I wanted to create — within a musical framework — a space for reflection, consideration, and unity around his life and legacy. It became an immensely meaningful journey for me, blending styles such

as polyphony, Gregorian chant, and the blues. Texas State was one of the first universities to perform the work in 2017, and I think that shows how committed the university is to create a first-class music program."

Johnson has been lauded for his "collage" programming style, combining music and poetry in a blend of sacred and secular, classical and avant garde, and classical and popular styles. Considered one of the most innovative choral directors in the country, Johnson says his style reflects the way people listen to music in the era of Spotify and Pandora.

"They're doing an iPod shuffle or downloading mixtapes," Johnson says. "They're bouncing around, listening to recommendations for music they might not have considered before that sends them down a new rabbit hole. Music isn't so locked into different genres. There is much more crossover. Collage works especially well for large ensembles."

To encourage collaboration by student musicians, he created Sound Lab, open to all majors, designed to foster the kind of wideranging collaboration and improvisation required of contemporary professionals. Johnson, who became the first artist in

residence at the School of Music in 2012, says he sees his role, besides as teacher and mentor, as being a liaison between the college and the professional music world.

"Especially in international playing and performing, you have to be able to draw from a lot of musical styles," Johnson says. "We need to be able to ask questions about how sacred and secular, and classical and folk styles can work together. We need broader collaboration among a wider collection of musical styles."

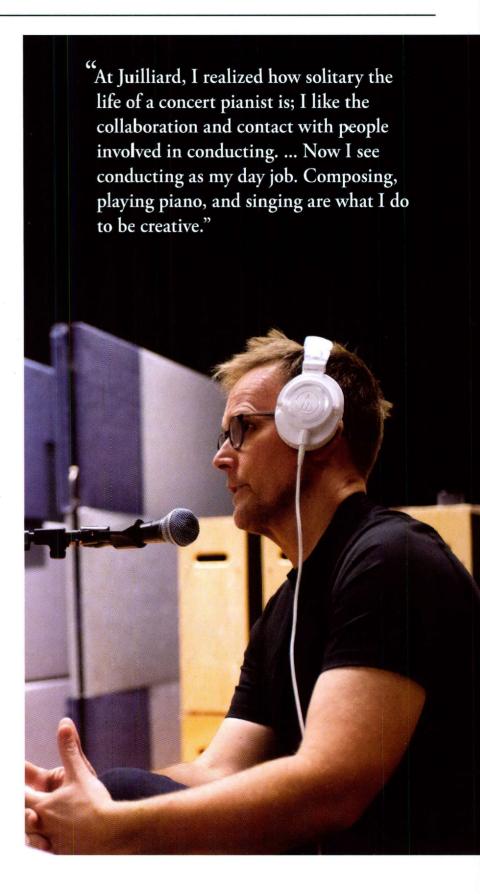
A Minnesota native, Johnson studied at St. Olaf College, in Northfield, Minnesota; the Juilliard School; and the University of Illinois; and earned his doctorate at Yale University. With a National Arts Fellowship, he studied with Helmuth Rilling at the International Bach Academy in Stuttgart, Germany.

"I grew up in church singing because I was the son of a Lutheran minister, but I started out as a piano major," Johnson says. "At Juilliard, I realized how solitary the life of a concert pianist is; I like the collaboration and contact with people involved in conducting. All through my university training, I was singing. After studying in Germany, I came back wanting to do something with choral performance. Now I see conducting as my day job. Composing, playing piano, and singing are what I do to be creative."

He is the music director of the Cincinnati Vocal Arts Ensemble and conductor emeritus of the Victoria Bach Festival, and has served as artistic director of San Francisco-based Chanticleer (1998-1999). A resident of Texas since 1990, he led the graduate program in choral conducting at The University of Texas at Austin from 1990 to 2001. The Texas Legislature designated him the official Texas State Musician for 2013.

Conspirare, which translates from Latin as "to breathe together," won the Best Choral Performance Grammy in 2014 for "The Sacred Spirit of Russia." Conspirare has released 12 albums on the Harmonia Mundi label, including Grammy nominees "Requiem," "Threshold of Night," "A Company of Voices: Conspirare in Concert," and "Pablo Neruda: The Poet Sings." The group has a total of eight Grammy nominations and one win.

In June, Johnson conducted the Texas State and Conspirare Choral Conducting Symposium for professional and nonprofessional choristers at the Texas State Performing Arts Center. ❖



Coach tackles NFL rumors head-on before football season gets underway

Welcome to Texas State, Jake Spavital

By Jayme Blaschke



Texas State head football coach Jake Spavital remembers the exact moment when insanity struck.

"I was actually making recruiting calls and my phone starts blowing up," Spavital says, torn between laughing and shaking his head in exasperation. "You know, it's interesting how word gets out."

That "word" hit the internet at 9:29 a.m. Jan. 9, when national sports columnist Bruce Feldman tweeted that Texas State University's newly minted head football coach was in line to be Kliff Kingsbury's offensive coordinator with the Arizona Cardinals. The fact that Spavital and Kingsbury were old friends, and Kingsbury himself had unexpectedly made the leap from college to the National Football League a month before, sent a wave of panic through Bobcat fans everywhere.

"I texted Kliff, and he was laughing about it," Spavital recalls. "I had to go and address this. It was pretty chaotic. I was sitting there with my staff, and my phone wouldn't stop ringing. I finally said, 'Let me tweet something out so I can end it all.'"

That simple tweet — #EatEmUp — calmed the Bobcat faithful, but Spavital still had to follow up with the members of his inaugural high school recruiting class, assuring the players and their families that he wasn't going anywhere. It was old news. Kingsbury had indeed offered Spavital the offensive coordinator position in early December, when the former Texas Tech head coach was still in negotiations with the Cardinals and New York Jets. Spavital had turned him down and thought that was that.

"I was already committed to Texas State. I already had assistant coaches I'd lured away from different jobs," Spavital says. "At that point, you've got a lot of responsibility on your shoulders with other people."

That responsibility has proved to be Spavital's biggest challenge as the former offensive coordinator settles into the

role of head coach. "The buck stops here," as President Harry S. Truman would say, but managing all the moving parts that make up a Division I football program is too much for any one person. Learning to give up direct control and delegate authority is something Spavital is still adjusting to.

"That's been one of the toughest challenges, because running the offense has been my baby for the longest time. I learned this a long time ago — you're only as good as the people you surround yourself with," he says. "I've got an offensive coordinator, Bob Stitt, who's called many more games than I have. I wanted to bring in a guy I trusted who had a similar vision to how I think. That allows me time to focus on other things, focus on game management, and focus on the operation of the program.

"Giving up the offense, that's difficult for me to do. I love calling plays. I get a rush out of that. There's nothing better. I've called close to 70 games in three different Power Five conferences. Not very many people have done that. I love that competitive advantage that you have when you're calling plays and out there competing," Spavital says.

"When you flip the role, as head coach you start asking, 'How can I help my people out? How can I be a servant leader?' I'll still be heavily involved with the offense, but I'm not going to step on Bob's toes. The thing I appreciate about this staff is that we don't have a lot of egos. It's all about putting the best product we can out there."

And the expectations of Bobcat faithful are sky-high. Before Spavital accepted the Texas State job in November, he was at West Virginia University under Dana Holgorsen and was widely considered one of the top offensive coordinators in the country. He had worked with record-setting quarterbacks such as Brandon Weeden (Oklahoma State University), Geno Smith (West Virginia University), and Johnny Manziel (Texas A&M University). With that kind of résumé, the buzz around Bobcat football is palpable. His calendar is booked solid with alumni events in Houston, Dallas, Austin, and San Antonio as well as various high school football clinics around the state. He's even made time to talk with student groups at Texas State.

"Whenever a new coach comes in, there's always a sense of excitement. That happens everywhere," Spavital says. "I'm trying to create some excitement, but when you go and meet these fans, they're already excited. All they want is to be a part of something bigger than themselves. They want to be a part of a team that is winning and having fun because they have a lot of pride in this university.

"That's the one thing I've seen the most, the pride that these people have. It's pretty cool to see where these guys want to compete with everyone else in the rest of the state," he says. "When you have people that believe and are committed to that, chances are that good things are coming your way." \bigcirc

2019 Texas State Football Schedule

AUG. 29

Texas A&M University

SEPT. 7

SEPT. 14

SEPT. 21

SEPT. 28

OCT. 10

University of Wyoming University of Louisiana Monroe

OCT. 26

NOV. 2

Georgia State University University of Louisiana Lafayette Coastal Carolina University

NOV. 9

Nicholls State University University of South Alabama

NOV. 16

Troy University

NOV. 23

Southern Methodist University

Arkansas State University

Appalachian State University

NOV. 30



Strutters to celebrate (b) Years



It's more than high kicks and parades for this sisterhood at Texas State

By Jacque Crouse

When high school teacher Barbara Guinn Tidwell decided in 1960 that she wanted to teach in college, she sent query letters to colleges and universities across Texas. Little did she know that her quest would begin a dynasty that is still alive and – well – definitely kicking.

In September, the 83-year-old will help celebrate the 60th anniversary of the precision dance and drill team that has performed in 26 countries, and at two presidential inauguration parades, the Macy's Thanksgiving Day Parade, college bowl games, NBA and NFL games, and "America's Got Talent."

"They have come a long way from those early days," says Tidwell, who directed the Strutters for 37 years. When Dr. J. Garland Flowers, the third president of Texas State University, answered Tidwell's letter, he said he wanted Tidwell, the former Kilgore College Rangerette, to start a dance team that could "keep the fans in their seats" during halftime. Tidwell began in August 1960, putting together a team that performed the very next month.

"Everyone in San Marcos who could sew was drafted and helped to make uniforms," she recalls. "At the last minute, I had to fly, and I mean fly, to San Antonio because we ran out of buttons."

Elizabeth "Stoney" Burk Walker (B.S. '73) and Linda Gregg Fields (B.S. '66) say being a Strutter helped them to build lifelong friendships and gave them a set of life skills that took them much further than just their college careers. "You learned about managing time, being on time, following through," Walker says. "Mrs. Tidwell

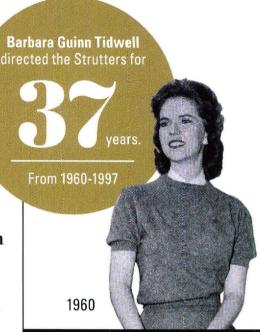
let you understand that you were there for an education and you were expected to do well in your studies. You were held to a higher standard."

Fields, a San Marcos native, remembers going with all her friends to Mrs. Tidwell's "Charm School" in high school. "You learned manners, how to walk, stand, and sit, how to dress properly for all occasions," she recalls. "She has been a huge influence in my life — I owe a lot to her as far as confidence and generally just how to run your life."

What started with 68 members in a precision drill team that performed at halftime grew to an internationally lauded group of about 100 members each year who also perform a Holiday Extravaganza and Spring Show.

Lisa Winters (B.A. '87), from the Rio Grande Valley, originally expected to become a Kilgore Rangerette. "I went to Mrs. Tidwell's camp and loved her and the campus so much, I never even tried out at Kilgore," Winters says. "She had such high expectations of what you should be. I could have been a wild, crazy kid, but not as a Strutter. I learned grace, poise, and life skills that have helped in my life and career."

When Tidwell retired in 1997, former Strutters Captain Susan Angell-Gonzalez became the second director/choreographer. Angell-Gonzalez directed the dance and drill



Former Strutters Captain

Susan Angell-Gonzalez

became the second

director/choreographer in

1997





Tammy Fife (B.S. '85) became director in 2013

COMING UP: STRUTTERS ANNIVERSARY WEEKEND

Texas Chic Gala 6:30 p.m. Sept. 6 University Events Center

Football home opener Sept. 7, Bobcats vs. Wyoming Cowboys Bobcat Stadium

ON THE WEB:

txstrutters.com/ facebook.com/StruttersAlways teams at San Antonio's Winston Churchill High School for several years, owned her own dance and cheerleading studio, and later opened the dance school ShowMakers of America. "When I was the director/choreographer of the Strutters, I used to encourage my students to push to their potential and dance with passion and heart," Angell-Gonzalez says. "It was my goal to make them believe they had the heart of a champion. I looked at each student as if they were a champion."

In 2013, Tammy Fife (B.S. '85) became director. Today, the Strutters also feature a Jazz Elite and Pom Squad. The Jazz Elite performs some of the more technically challenging dances and the Pom Squad performs on sidelines during games, featuring women who are probably the best athletes on the Strutters and who energize fans during the games. Fife says a number of Strutters have gone on to become cheerleaders for the Dallas Cowboys and the Houston Texans, as well as the San Antonio Spurs Silver Dancers.

Melita Wallace (B.B.A. '18) was the first leader of Pom Squad. She says becoming a Strutter was one of the best decisions she made. "Besides travel opportunities, it taught me to facilitate, organize, and to be a better leader and public speaker," she says.

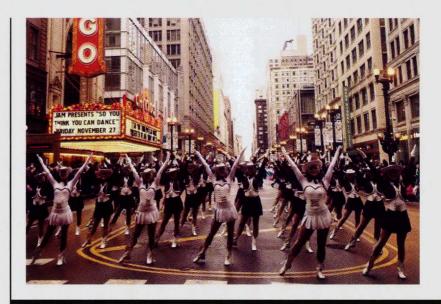
Pom Squads at most NCAA Division I universities are the only drill team. When Texas State went Division I and the decision was made to have a Pom Squad, Fife wanted to keep the tone and culture within the Strutters traditions. Wallace noted that the squad is part of a larger Strutter tradition. "You form friendships for life. It is interesting how on such a large team (there were 133 Strutters her first year) you still end up feeling like it is smaller, getting to really know each other through team bonding activities," Wallace says. "It is a sisterhood as well as a dance team."

Selina Flores (B.S. '15) thought she would spend her life teaching elementary school but says being a Strutter changed her goals. After graduation she was a Cowboys cheerleader for two years and then taught kindergarten. "Now I am in my first year as director of a high school drill team in Houston," she says. "I loved the dance world so much I just couldn't stay out of it."

Flores says Fife has become her "mentor for life" and says that she learned critical life skills as an officer for three years and head captain her senior year. "Being a Strutter prepared me with discipline, dance, passion, leadership, friendship, and connections," Flores says. "You learn manners, how to be a young professional and to be an example for others."

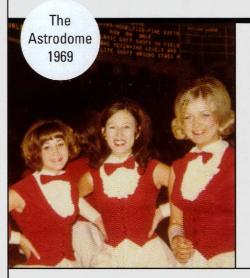
Wallace agrees the Strutter training is invaluable. "I am definitely proud to be a Strutter alum," she says. ♥

The Strutters have been invited to perform in the 2019 Macy's Thanksgiving Day Parade.



"I thank God for the opportunities Strutters presented me with and the memories I made! Not only did I gain lifelong friends, but I had the amazing opportunity to perform in the Macy's Thanksgiving Day Parade. I will never forget the palpable energy from the crowds that day as we performed. I was also blessed to be under the direction of both Mrs. Angell and Mrs. Fife — each one of those women holds a very special place in my heart and I'm forever grateful for both of them and the unique lessons I learned."

— Taylor Hansen Rasmussen (B.F.A. '14), head captain 2014



Have appeared in



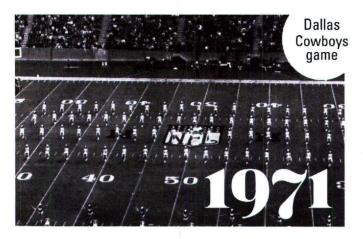
including the 1972 film "The Getaway" starring Steve McQueen

"In elementary school, the fortune-teller at the carnival said I would one day dance on TV. I thought that was impossible, as I had never even taken dance lessons. Well, I did dance on TV at an Oilers game with the Strutters. ... I was around the 50-yard line, and the camera kept rolling back and forth in front of me. Oh, how I remember that day dancing and standing by Joe Namath!"

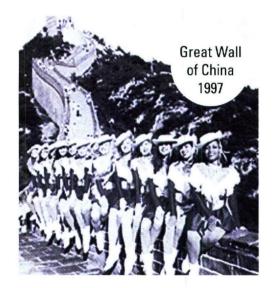
— Mary McBeth (B.S. '72)

The Strutters have performed at the Macy's Thanksgiving Day Parade, college bowl games, NBA and NFL games, "America's Got Talent," and

presidential inaugurations.







"Strutters has meant more to me than I can put into words. Mrs. Tidwell instilled the notion that you are always a Strutter, and Strutters are always classy. I carry those lessons with me to this day, and work to instill those lessons in the current Strutters. Most Strutters of my era and before would say that Strutters was less about the dancing and more about knowing how to stand out in an interview or social situation.

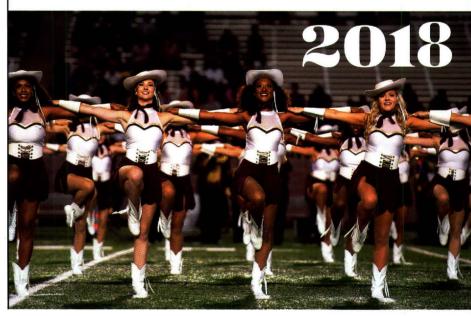
"As the years have passed, and Texas State Athletics has moved to Division I, and the level of dancers auditioning for Strutters has greatly improved, more emphasis is placed on the dancing and entertaining the audiences."

— Tammy Fife (B.S. '85)



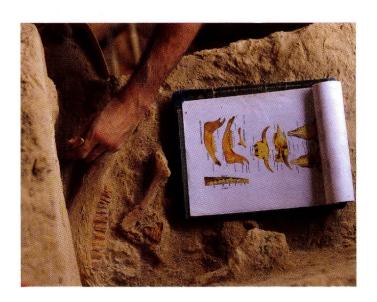
26 countries spanning

continents.





Students discover the world of ancient Texans | By Mary S. Black



In the thorny desert along the Mexican border west of Del Rio, Texas State University students are learning methods of field archaeology and rock art recording and preservation. Dr. Carolyn Boyd, Shumla Endowed Research Professor, and Dr. David Kilby, associate professor, both in the Department of Anthropology, are leading this unusual joint field school.

Students will collect samples of bone and dirt at the Bonfire Shelter site, dentify and record new archaeological sites, dig test excavation units of prehistoric rock ovens used for baking desert plants, and build 3D models of these archaeological features from photographic imagery. In addition, they will precisely document rock art and learn cutting-edge research and preservation techniques, such as creating gigapixel pancramic photos of rock art murals and analyzing paint stratigraphy using

A crew member carefully excavates the jawbone of a bison killed by prehistoric hunters at Bonfire Shelter.

66

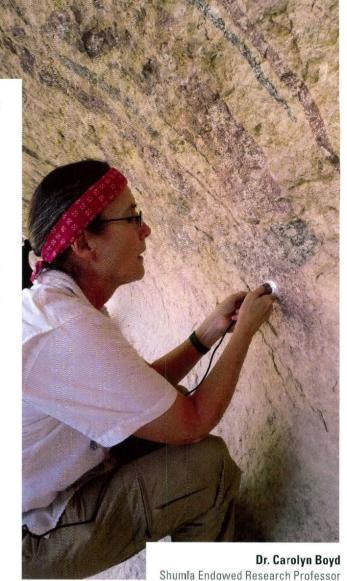
We're able to understand the stories or narratives of 4,000 years ago, the complexity of our ancestors. They had a highly sophisticated belief system, as well as a library of information on astronomy, botany, and other aspects of the environment."

- Dr. Carolyn Boyd

digital microscopy. These experiences cannot be gained in a classroom, but in the rugged landscape of southwest Texas.

Kilby is working at Bonfire Shelter, at the end of a short box canyon where Native Americans stampeded bison off a sheer cliff about 3,000 years ago. A lower bone bed deposit, about 12,000 years old, suggests a much earlier jump event as well, perhaps orchestrated by distant ancestors.

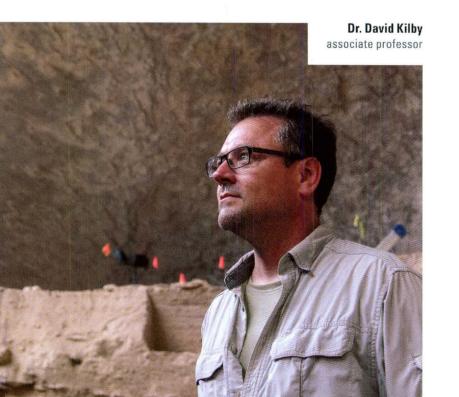
The people who hunted these animals 3,000 years ago also painted large polychrome murals in rock shelters in the canyons flowing to the Rio Grande. Over 30 experimental radiocarbon dates show the murals to be between 4,000 to 2,000 years old. Boyd has spent 25 years trying to understand these paintings using the methods of both art and science.



"Bonfire is difficult to access," says Kilby.
"The nearest town of any size is an hour away, and every day we have to climb down the cliff face on a narrow, steep trail, or use precarious ladders. It is difficult to get equipment in and out. Last year, we built a crane from a truck winch bolted into the rock on the rim and used a big basket to lower equipment and haul up bone and dirt samples. Heat in the canyons is also a problem, but inside Bonfire itself, it is always cool. In fact, it used to be called 'Icebox Cave' because of this quality."

Most rock art locations are also difficult to reach. Some are in precarious overhangs on steep cliffs overlooking the Rio Grande or the Devils and Pecos rivers and their tributaries. The paintings were made on limestone walls using four colors of natural pigments — black, red, yellow, and white — often with bold enigmatic designs. Some are as much as 14 feet high and stretch over the entire wall and ceiling of a rock shelter.

One of the most exciting discoveries for Boyd came when she saw now the colors were systematically applied to the design. Contrary



Ultimately students are learning about prehistoric cultures and their adaptations to life in the Chihuahuan Desert, thousands of years of human experience."

- Dr. David Kilby

to earlier ideas that the paintings were little more than ancient graffiti, she realized that black pigment was applied first, followed by red, then yellow, and white last. This meant that the original artist had thoughtfully planned the entire composition. Using a digital microscope to observe minute details, she has documented this sequence at White Shaman shelter and Rattlesnake Canyon. About 98 percent of the samples showed that black paint was always applied first, followed by the other colors, suggesting a ritual formula in the artwork.

Early in her career, Boyd trained as an artist, so she brings the eye of a painter to these remote reminders of past lives. "I was able to understand composition, elements of design, and technical aspects, such as the need for scaffolding to paint the ceilings of these large limestone shelters. It wasn't until we applied new technology, however, that we were able to prove what the artist had already perceived. We've bridged science and art." Both are essential in her work.

Boyd believes the function of the murals is to communicate sacred information to the viewers. It's easy to imagine people gathered near one of these images to hear the stories of the gods reenacted by the elders, drums beating, fires burning, and songs being sung. One of the major stories told by these primeval paintings concerns the birth of the sun each morning from the dark underworld, opening the universe to human life.

"The murals in this area are a window to the past," Boyd explains. "Through them we're able to understand the origin and tenacity of myth. We're able to understand the stories or narratives of 4,000 years ago, the complexity of our ancestors. They had a highly sophisticated belief system, as well as a library of information on astronomy, botany, and other aspects of the environment."

"We're studying aspects of the same people," says Kilby.

"The people were the same," Boyd agrees. "Their stories were the same. We are working to put a face on the people of the Lower Pecos."

After many years of work, "I started seeing patterns in the rock art," she explains. "One attribute found with another attribute over and over again. When I read about the Huichol Indians in Mexico, I started to see the same patterns. I'll never forget

showing the White Shaman Shelter to Huichol elders and having them say, 'Yes, there is Father Sun. This is telling the story of our people.' The core of these stories is still being told today by Indians in Mexico."

Kilby also studies ancient stone tools, particularly caches of Clovis projectile points from about 13,000 years ago. No Clovis tools have been found at Bonfire or in the Lower Pecos, but Paleoindian points dating to about 12,000 years ago have been recovered there, including several Folsom points.

"We're trying to minimize our impact at Bonfire," says Kilby, by stabilizing a series of pits dug in the 1960s and 1980s and the beds of burned bison bones. Continuing the goals of the Ancient Southwest Texas Project, led by Dr. Steve Black, also of Texas State, students will learn preservation techniques to save these remains for future archaeologists to analyze with improved technology and new ideas. Kilby has been working at Bonfire for more than two years and anticipates at least another year with support from a Texas State Research Enhancement grant, the National Geographic Society, and others.

"Ultimately students are learning about prehistoric cultures and their adaptations to life in the Chihuahuan Desert, thousands of years of human experience — what they ate, how they got it, their subsistence, and their belief systems through the art. It's critical in liberal arts to expose students to other cultures and norms, and other ways of thinking. Archaeology and anthropology expose people to vast cultural diversity," says Kilby.

Field school students are discovering and preserving relics from a way of life very different from our own. Such concrete experience builds respect for other people, cultures, and beliefs in deep, tangible ways.

"There are so many theses and dissertations waiting to come out of here, I don't even know where to begin," says Boyd. Every one of the staff archaeologists at the Shumla Archaeological Research & Education Center — the primary Lower Pecos rock art research facility she founded in Comstock — are from Texas State.

"The finest of the students come from our university. As far as I'm concerned, there is no university in the state that can hold a candle to Texas State in terms of thinking outside the box," Boyd says. •

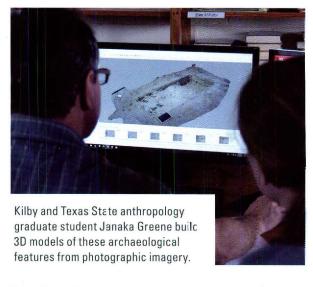
Texas State anthropology graduate student Janaka Greene uses a soil color template to describe sediments in Bonfire Shelter.

Below: A tiny flake of stone from resharpening a prehistor c butchering tool is found while screening dirt from the excavation. This and other stone tools are clear indications of human activity in the shelter.



Texas State
undergraduate crew
member John Hedges
double-checks
information as David
Kilby takes notes while
overlooking the deep
excavation trench
in Bonfire Shelter's
interior. At the far right,
Texas State graduate
student Sean Farrell
works on Ice Age
deposits in Bone Bed 1.





Right: Texas State anthropology graduate student Ashley Eyeington uses a survey instrument to map deposits.





A WINNING YEAR



REFLECTIONS
ON A
RECORD-SETTING
SEASON IN VOLLEYBALL

BY MARK WANGRIN

Behind the dark oak door of Office 210-C at the University Events Center is a carefully curated collection of photos, stuffed animals, plaques, hats, bobbleheads, a gumball machine that dispenses maroon and gold M&M's, and other assorted trinkets and baubles.

As one young Texas State Athletics staff member referred to them when speaking to the office occupant, "artifacts."

To Karen Chisum, Bobcat volleyball coach, they are memories. This is the sum of her Texas State University career as student and coach, spanning more than five decades, four school names, and six university presidents. On one wall are two large picture frames, each with spots for 20 team photos. Thirty-nine are filled. There's room for one more, which figures to be a very special one, but more about that later.

The back wall isn't a wall at all, but a giant window. It is the first one Chisum has ever had in an office in 41 seasons coaching at Texas State — she was an assistant in 1978 and 1979 — with a view of Bobcat Stadium and the baseball and softball fields.

On the third wall are a 54-inch flat screen TV, plaques, framed photos, and a 2-by-4-foot collage of snapshots of family, friends, players, coaches, and the random celebrity. There's a picture of Chisum with country music icon and Distinguished Alumnus George Strait (B.S. '79), whose father taught her middle school math and science. Here's a picture of Chisum with action actor Chuck Norris, who graciously posed for photos and signed autographs during a chance airport meeting.

It's an impressive display of achievement, nostalgia — and life. You take it all in and then ask Chisum which of these memories is most special. The answer comes quickly. "That game ball right there," Chisum says, pointing to a blue-and-white volleyball, signed by coaches and players from the 2018 team. Commemorated in permanent marker — NCAA First Round! vs. Rice — it occupies a prominent spot on Chisum's desk. It's the game ball from the biggest victory in school history — and a tease of what's to come.

That's where that empty space in the picture frame comes in — it eventually will be filled by a group of smiling young ladies who, if all goes according to plan, will usurp the 2018 team as the greatest in school history.

"That's the plan," Chisum says, "and Emily DeWalt is a big part of that."

What goes next on Chisum's desk, and ultimately to a new trophy case, depends largely on a 5-foot-10 sophomore who plays setter, the most crucial position on the court and the one responsible for deciding in a split second which of her teammates to set up to spike the ball to the floor at her opponents' feet. DeWalt is an unassuming





player, short for her position, who wasn't a starter at the beginning of last season, but by its end earned a Sun Belt Conference Player of the Week honor a record 11 times and an honorable VolleyMag.com All-America mention.

Not bad for a player who didn't even think about a college career until one of her former club coaches talked to her after her high school freshman season about playing at his school. "That's when I realized that maybe I was better than I thought," DeWalt says. "I always thought I'd just go to college and get an education. Never really thought much about playing." Fortunately for the Bobcats, that changed.

Chisum knew she was going to have a strong team last fall. Four seniors provided leadership and two of them, Madison Daigle and Amy Pflughaupt, would earn All-Sun Belt honors.

Then there was the promise of the recruiting class ranked 33rd in the country — some talented freshmen and a 6-foot-3 junior transfer, Cheyenne Huskey, who left Columbus High School (Texas) to play at the

University of Florida and wound up setting in the NCAA title game as a freshman, only to decide she wanted a smaller-profile program closer to home.

The freshmen included outside hitters Janelle Fitzgerald of Mansfield and Sarabi Worsley-Gilbert from Orlando, Florida, who made up for her small 5-foot-9 stature with great leaping ability, and defensive specialist Kayla Granado of Round Rock. The prize was Jillian Slaughter, a 6-foot middle blocker from San Antonio's Madison High School, whose recruitment led to the Bobcats locking in on her club teammate, DeWalt.

DeWalt was supposed to be brought along slowly, with Huskey handling the setting role. Just three days into the season, first-team all-conference outside hitter Megan Porter tore her anterior cruciate ligament and the plan went out the window. Chisum figured Huskey had the size and footwork to take Porter's spot. That meant giving the setter spot to a freshman. The decision wasn't as difficult as it sounded.

"When I realized Emily could do all she can, we gave her the team," Chisum says.

Lo and behold, DeWalt excelled, showing a preternatural knack for seeing what was happening on the other side of the net without looking. "My mom would tell you I have terrible vision," DeWalt says. "Without my contact lenses, I wouldn't be able to recognize Coach sitting 10 feet away."

For DeWalt, though, vision isn't all about seeing. "She's got great volleyball IQ," Chisum says. "As a setter, you have to know what the defense is doing, where the block is setting up, even when you have your back to it. Sometimes the things she does are probably not what I would have called — but they work."

A year ago, DeWalt was just trying to get acclimated and wound up leading the Bobcats to their first NCAA tournament victory in school history. Now she's got bigger things to think about, like how the Bobcats can top that. "I'm still amazed," DeWalt says. "When you come in, you always hope for a season like that, but you never know what will happen. We are extremely proud of what we did last season, and all we can hope for is to do the same next season - and from what I've seen so far, we're on the road to that. It's going to take each other getting on each other, it's going to take keeping each other in check more than the coaches keeping us in check."

That's what families do, and the Bobcats are family. Last summer, Chisum asked her players what Texas State meant to them. Nine of the 12 immediately said "Family."

"The other three," Chisum recalls, "said, 'Everything.'"

Asked what it means to her, DeWalt says, "There's no other place I'd rather be. None," and Chisum smiles. That's what she wants to hear.

Chisum arrived at the university in 1968 as a student, played tennis and softball, and earned a bachelor's degree in 1972 and a master's in 1978. Except for six years coaching at nearby high school outposts San Marcos and New Braunfels, she's been here ever since.

"I want to turn their blood maroon, just like mine," says Chisum, who in December raided her stash of maroon and gold M&M's to bake cookies to greet new football coach Jake Spavital. "They say I'm the biggest Bobcat in San Marcos, maybe the state."

Nothing would make her maroon blood run warmer than earning another blue and white volleyball for that special spot on her desk. • LAST SUMMER,

CHISUM ASKED HER PLAYERS

WHAT TEXAS STATE

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NINE OF THE 12 IMMEDIATELY SAID

"FAMILY."

"THE OTHER THREE,"

CHISUM RECALLS, "SAID,

'EVERYTHING.'"





OplD **OPERATION** IDENTIFICATION

FORENSIC ANTHROPOLOGY WORKS TO RETURN THE BODIES OF MIGRANTS TO THEIR FAMILIES

BY ROBYN ROSS PHOTOS BY JOSHUA DAVID MATTHEWS

A breeze rustles through Sacred Heart Burial Park in Falfurrias, ruffling the faded silk flowers and spinning the pinwheels that adorn the graves. Near a statue of an angel, its hands pressed together in prayer, a team $of \, Texas \, State \, for ensic \, anthropology \, students \, is \, hard \,$ at work.

Graduate student Molly Kaplan sits at the edge of a trench where her teammates are digging carefully, using ice cream scoops and clay sculpting tools, around the edge of a half-buried body bag. The plastic bag that holds the bones has partly disintegrated, and Kaplan's partners hand her tiny toe bones they find as they sift through the dirt.

"This project is a balance between getting used to this work, but not being fully desensitized - because these are people," Kaplan says.

For the past week, Kaplan and 22 other students, most of them graduate students in forensic anthropology, have been exhuming bodies of unidentified migrants

THAT'S WHY WE'RE HERE, BECAUSE WE KNOW WHAT MORE WE CAN DO FOR THEM. WE CAN USE OUR ANTHROPOLOGY SKILLS. WE CAN COLLECT DNA SAMPLES. WE CAN COLLABORATE WITH OTHER INDIVIDUALS WHO ARE COLLECTING DNA FROM FAMILIES, AND WE CAN WORK TOWARD IDENTIFICATION.

..

DR. KATE SPRADLEY

DIRECTOR OF OpID

buried in Sacred Heart. Basing their efforts on information from cemetery maintenance workers, tips from locals, and the team's prior pedestrian surveys of the burial park, they've used ground-penetrating radar to search sections where migrants might have been buried without a grave marker. When they find a burial, they use photogrammetry — making measurements from photographs — to document the scene so they can reconstruct it digitally.

On this trip they'll find 15 bodies, which will be transported to Texas State's Forensic Anthropology Research Facility and Osteology Research and Processing Laboratory (ORPL), where the remains will be cleaned, analyzed, and stored until they can be returned to families in their home country.

Most of the remains buried at Sacred Heart belong to migrants who crossed the border, 80 miles south of Falfurrias, and hit the brush to avoid detection at the Border Patrol checkpoint on Highway 281 just outside of town. The surrounding ranches in Brooks County are an inhospitable landscape of mesquite thickets and prickly pear that becomes even more difficult to navigate in the heat and humidity. Each year, many migrants don't survive the journey, falling victim to dehydration and exposure. In 2017, at least 104 people died in the Border Patrol's Rio Grande Valley Sector, which includes Brooks County.

From the early 2000s until as recently as 2012, Brooks County, overwhelmed by the number of dead, buried the remains in whatever corner was available at the public cemetery. Multiple remains, wrapped in body bags or even plastic trash bags, were placed in the same graves, along with the clothing and personal effects found on the deceased. No one tried to figure out who they were. These are the bodies that this team is exhuming and working to identify.

County officials often point to the migrants' burial in the cemetery as a way to offer them dignity, says professor of anthropology Dr. Kate Spradley, the director of Operation Identification (OpID). "I hear, 'What more can we do for them?'" Spradley says, adding that she doesn't fault the county for being short on resources in a mass disaster. "That's why we're here, because we know what more we can do for them. We can use our anthropology skills. We can

collect DNA samples. We can collaborate with other individuals who are collecting DNA from families, and we can work toward identification."

Today, the bodies of migrants found in South Texas are sent to the medical examiner in Laredo for autopsy. The remains are then sent to the University of North Texas, which conducts a forensic anthropology analysis and enters a DNA profile in the Combined DNA Index System, or CODIS.

In 2013, Texas State began collaborating with other universities to exhume bodies from South Texas cemeteries, analyze the remains, and try to return them to the person's family. The university now leads the exhumation efforts, and since 2016, all exhumed remains have been sent to its forensic anthropology labs for analysis.

Spradley estimates at least 150 students have participated in some aspect of the work.

"I started volunteering as early as I could because I love this work," says graduate student Shelby Garza (B.S. '17). "We have to bring in all the subfields of anthropology, like cultural and forensic archaeology. It's very holistic, and it's got a large humanitarian aspect to it."

Once remains are exhumed, the team does an initial inventory on site. Students open the body bags to assess the condition of the remains and scour them for clues to the person's identity: a tag with a date written by the funeral home, a shoe with an identification card hidden inside it, a child's drawing with a name. Photos of the migrants' clothing and personal effects are posted to the National Missing and Unidentified Persons System (NamUs) so that families missing a loved one might recognize them.

When the remains are brought to the ORPL, located at Freeman Ranch, students clean the bones and prepare them for analysis. The team analyzes the skeleton for clues to the person's identity. By comparing the migrant remains with other skeletons, such as those from the department's collection of donated bodies, the students can determine the person's approximate age, ethnic background, and sex. The bones are measured to calculate height, teeth are counted, and any distinctive conditions are noted. All information is recorded in NamUs. Once the remains



CHLOE MCDANELD (LEFT) AND COURTNEY SIEGERT (RIGHT) CLEAN AWAY TISSUE AND DIRT FROM #0607'S SKELETAL **FEMAINS TO BETTER** ANALYZE THE BONES AND SEE ALL SURFACE AREA.

have been analyzed, the bones are stored at the lab -270 boxes and counting — until they're identified.

In the past five years, OpID has identified 30 people. Some identifications occurred because the missing migrant's DNA was found to match a family member's sample via CODIS. Other times, the family of a missing person recognized an article of clothing in NamUs. In still other cases, the migrant's personal effects included a name or phone number, which led the OpID team to develop a hypothesis about the person's identity.

OpID teams continue to clear South Texas cemeteries of unidentified migrant burials. Spradley accepts a limited number of undergraduate volunteers for trips like the one in January to Falfurrias. One of

the five students is anthropology major Ana Figueroa Yanez. Born in Mexico, she moved to the United States at age 10 when her mother successfully applied for permanent residency. Figueroa, now a U.S. citizen, says she feels a connection to the migrants.

"They were trying to do what my mom did for us - in a different way. At the end of the day they had the same gcal," she says. "The very first day of excavation we found some remains, but as soon as we hit that box, had a feeling of, 'We're here for you. We found you. Don't worry, we're going to get you out, and we're going to try our best to help you." 🗘

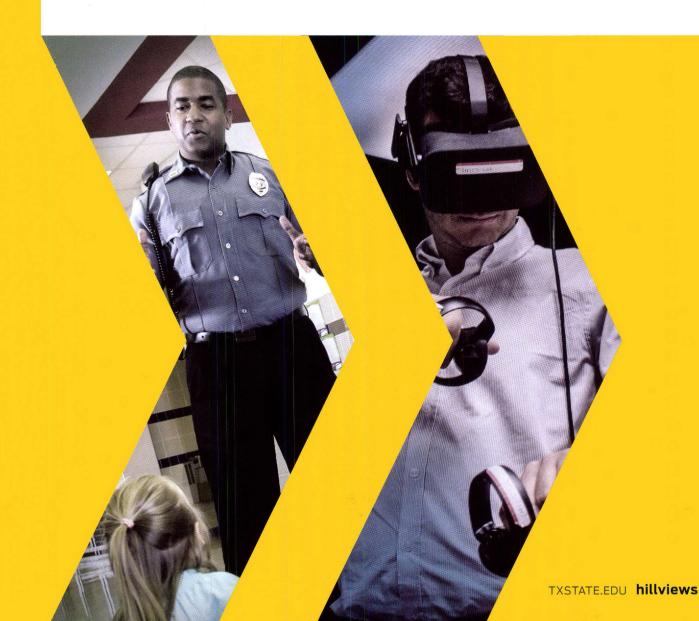
PUBLIC SAFETY

Delivering innovation to solve real-world problems



Texas State University, we are committed to making communities and the people who live and work in them more resilient. Safety is at the root of that resilience, providing the necessary foundation for economic development and growth, learning, and innovation. Whether in the lab, in the classroom, behind a computer, or on the front line training first responders, our research and programs deliver real-world solutions to some of today's most complex safety and security issues.

The following pages highlight how we call on the very best of Texas State — our creativity, tenacity, intellect, and dedication — to make your world a safer place.



GEOGRAPHIC PROFILING

Rossmo pioneers method of pinpointing crime, criminals in solving cases

By John Goodspeed



hat do Jack the Ripper, serial killers, terrorists, bumblebees, invasive algae, and great white sharks have in common?

Their home turfs can be pinpointed by a criminal investigative technique pioneered by **Dr. Kim Rossmo**, University Endowed Chair in Criminology and director of the Center for Geospatial Intelligence and Investigation in the School of Criminal Justice.

While a police officer in Vancouver, Canada, Rossmo's work toward a doctorate in criminology at Simon Fraser University resulted in a dissertation on a new methodology called geographic profiling. It uses locations of serial crimes to determine the area where the perpetrator lives and incorporates mapping software based on a computer algorithm to help detectives greatly narrow the list of suspects.

After he founded a geographic profiling section at the Vancouver Police Department, Rossmo used the methodology in 1998 to determine that a serial killer was behind cases of missing sex trade workers. A conviction followed in 2002.

He ended up getting several patents and developing analysis software that helped solve thousands of crimes around the world. High-profile cases Rossmo worked on include the Beltway Sniper, the Zodiac Killer, and the Golden State Killer.

"The last five years I was with the Vancouver Police Department, all I did was work on unsolved cases, probably a few hundred," Rossmo says. "You don't solve any case with geographic profiling. Detectives working on it solve it. Geographic profiling just provides a piece of the puzzle."

The method can be applied to such serial criminals as rapists, arsonists, bombers, kidnappers, and burglars. Word spread of the successful application of geographic profiling. "People asked for help in this case and that case. People from the United States, Canada, and the United Kingdom wanted to have police officers trained," Rossmo says. "Officers from China, South Africa, the Netherlands, Sweden, and other European countries have been trained in the methodology.

"It's very satisfying to know that your work is not going to just sit on a library shelf. On the other hand, it creates a standard for yourself — you want to keep doing stuff that is useful."

Rossmo joined Texas State University as a research professor in 2003, after serving as research director at the Police Foundation in Washington, D.C.

"We did a lot of research for the intelligence community and the military, especially when so much was going on in Iraq and Afghanistan," he says. "Some of the military people deployed were in the Reserves and employed in law enforcement. They contacted me to help with IEDs (improvised explosive devices) and other attacks, and we ended up getting a number of grants." Rossmo's research

money from a variety of U.S. and overseas sources totals \$3.76 million.

Rossmo also supervises graduate students, including some who receive funds from working on the projects and use the research as the basis for publishing or their dissertations. His students have pursued careers in academia, law enforcement, and intelligence.

Consulted, interviewed, and appearing in numerous media and entertainment outlets, Rossmo's credits include the film *Zodiac*, the television show "Numb3rs," and a recent book, *The Hunt for the 60s' Ripper* (Mirror Books, 2017), by London-based writer Robin Jarossi, about a serial

killer in London with parallels to the Jack the Ripper. In 2014, Rossmo focused on the original Ripper, using data from original police investigations to pinpoint the street where the Ripper lived while terrorizing London in 1888.

Geographic profiling has also spread to zoology and biology when Rossmo was

asked to investigate the hunting patterns of great white sharks off Africa, the foraging behavior of bats and bumblebees, invasive species of algae in the Mediterranean Sea, malaria breeding pools, and infectious diseases.

"It's really exciting when you see your work applied in other disciplines," he says. "It doesn't happen that often in criminology."

Rossmo's dozens of awards and honors include the Western Society of Criminology's 2018-2019 Paul Tappan Award. Much of his current research is focused on criminal investigative failures, including those that remain unsolved or result in wrongful convictions. While Rossmo does not know where geographic profiling will lead next, he has a clue.

"The latest thing I've heard is a query from scientists in Malta. They want to apply geographic profiling to crowdsourced reports of earthquakes and tremors," he says. "Those reports come in quickly, faster than with sensors, and will provide real-time data for analysis."

Then Rossmo can add seismology to his earthshaking list. \bigcirc

Publications

Geographic Profiling (CRC Press, 1999)

Criminal Investigative Failures (CRC, 2009)

THE EYE OF THE BEHOLDER

Oleg Komogortsev sees a future where his eye-sensor technology is essential to daily life

By Michael Agresta



rom today's perspective, the idea of computer systems that track our tiniest eye movements may seem like a far-off futurist's dream. It wasn't so long ago that only Silicon Valley entrepreneurs and technologists could imagine us walking around with tiny supercomputers in our pockets, navigating the world using the internet.

If **Dr. Oleg Komogortsev**, associate professor of computer science, is correct, the next big shift in mobile computing and gaming might be widespread adoption of eye-sensor technology — and his research is building that future. "Right now, I'm working to make it possible so we will have, let's say, at some point in the future, billions of these sensors," Komogortsev says. "I think it will be possible as a part of virtual and augmented reality platforms."

Komogortsev has been collecting high-level awards for his research into the human eye and eye-sensor technology, including two Google Virtual Reality Research Awards in support of his work at Texas State and a 2014 Presidential Early Career Award for Scientists and Engineers. This latter award is "the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their independent research careers," according to the White House. It was given to Komogortsev in recognition of his research in cybersecurity with an emphasis on eye movement-driven biometrics and health assessment.

Komogortsev envisions multiple applications for eye sensors in near-future consumer technology. The first reason they may be widely adopted is security. Because the movements of the human eye are far more complex, individuated, and difficult to artificially replicate than the human fingerprint, Komogortsev predicts that eye sensors will soon replace fingerprint sensors as the biometric security technology of choice.

Ninety percent of the brain is involved in the process of vision. That makes building a fake version of a user's eye impossible for hackers — because mimicking an individual's unique patterns of eye movements would be nearly as complex as mimicking an entire brain. "For somebody to be able to spoof the system, they would have to accurately replicate the internal structure of the brain and the eye, which is impossible with the current technological state of our civilization," Komogortsev says.

A second application for eye-sensor technology and perhaps the "killer app" that will lead to its mass adoption in consumer technology - is its importance in improving graphics for virtual reality (VR) and augmented reality (AR) systems. A large, expensive bandwith-hogging system may not need eye sensors, but to build systems that are light, mobile, cheap, and better at conserving power and working through limited internet connectivity, eye sensors can be a big help. That's because of a process called "foveated rendering," an emergent graphics technology that ensures wherever the user's eye is looking inside a VR headset or AR wearable device, the graphics quality is maximized at that exact point. While display areas near the user's focal point are rendered high-quality and crystal-clear, display areas in the user's peripheral vision are allowed to be blurrier, like a lower-resolution photograph.

This process mimics how the human eye works. "For the user, there is no change in the perceptual



quality because, the way the human eye operates, you only see quite well at the point you're looking at, and the periphery is blurred," Komogortsev says.

VR and AR devices will require eye sensors to be able to know which way the user is looking and render graphics accordingly. By skimping on graphic resolution in peripheral-vision areas of the display, the device can save on battery power and bandwidth, making mobile VR and AR possible. "That's why Google was interested," Komogortsev says. "In their Cardboard division, you have the form factor of an inexpensive VR platform that is powered by the mobile phone."

The third and final application for Komogortsev's eye-sensor research in consumer technology is health tracking. Many diseases and ailments, from concussions to Parkinson's, are known to have symptoms involving changes in eye movement patterns. If we were walking around with devices that tracked our eye movements, those sensors could perform the bonus service of keeping an "eye" out for such changes.

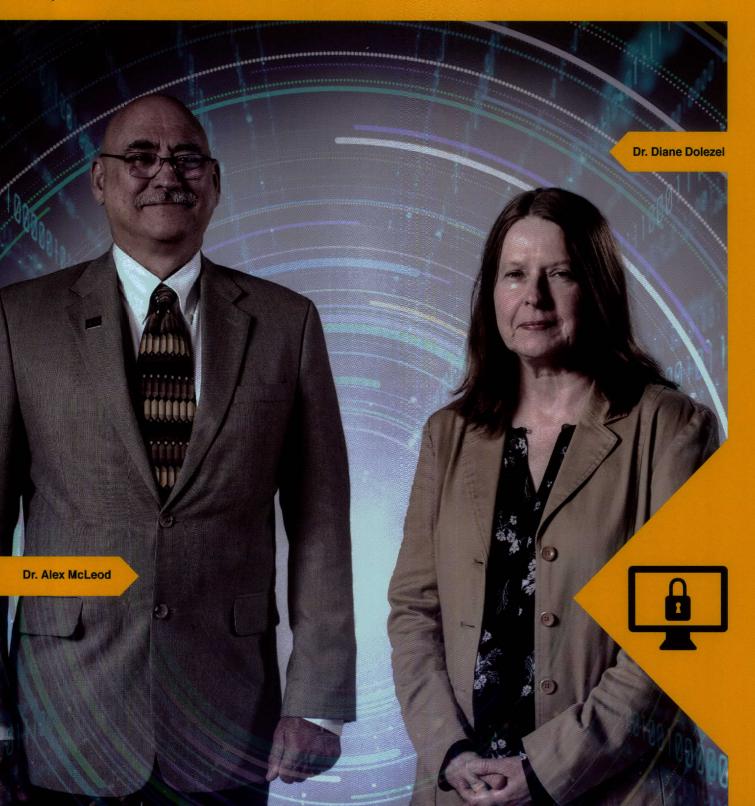
"Let's say you have a VR platform that you're using on an everyday basis, and let's say a person starts devaloping some neurological condition — for example, multiple sclerosis," Komogortsev says. "It will be possible to alert the user to go and see a doctor. Then, the medical professional can make a much more accurate decision about what is happening to the user." He reasons that this intervention could lead to earlier detection, earlier treatment, and better outcomes for those who suffer from neurological ailments.

Komogortsev acknowledges that medical privacy is an important concern in this automated diagnosis scenario. That's not his knot to untangle, however. As a university-based researcher, he's happy to keep his focus on the research, not the questions of how to bring it to market. "We do have hardware prototypes in the lab that we are developing, but those prototypes are for the purpose of just showing to the industry that this is possible," he says. "My hope right now is that companies such as Google or Facæbook, or others, would see value in this type of work and develop products around it." \(\infty\)

CYBERSECURITY: KEEPING INFORMATION SAFE

Researchers tackle data breaches that threaten healthcare

By Salwa Choucair Lanford



ust read the daily headlines to find them — cybersecurity breaches of healthcare organizations both large and small. Even the popular medical drama "Grey's Anatomy" turned to ransomware when choosing a storyline plucked from real life. On the TV show, the fictional Grey Sloan Memorial Hospital staff members received a message on their computer monitors stating, "We own your servers. We own your systems. We own your patients' medical records." Then the perpetrators demanded a large sum of money in order for the hospital's work to return to normal.

This type of security breach is exactly what Texas State University College of Health Professions researchers **Dr. Alex McLeod** and **Dr. Diane Dolezel** are hoping to resolve. While security breaches are becoming a prominent threat to the healthcare industry, explains McLeod, chair of the Department of Health Information Management and associate professor, the reasons why the breaches take place in this specific environment must be addressed.

A former captain with the San Antonio Fire Department Emergency Medical Services, McLeod is a natural fit for this research that combines his experience in healthcare with his education in information technology (IT). "When it comes to keeping health information safe, there is a natural link between computer security and healthcare data," McLeod says. "Look in the news any day of the week, and you will see breaches. There have been more than 2,000 healthcare breaches since 2009. Millions and millions of records have been breached. If someone finds your healthcare record, it has enough information for that person to create credit in your name, use your information to obtain medical services, and simply wreak havoc in your life."

Drawing from her experience working in IT, Dolezel was interested in the increasing data breach notifications she was seeing in healthcare. Combining forces, the duo began looking at specific data in order to determine what factors may be causing these breaches. Their initial research has produced a dozen published papers in professional journals including *Decision Support Systems*, a Tier 1 journal. They presented their findings last year at the annual Healthcare Information and Management Systems Society (HIMSS) conference.

Armed with data from the U.S. Department of Health and Human Services (HHS) about

Keeping personal information safe

- Maintain strong passwords with at least eight characters featuring upper- and lowercase letters, numbers, and symbols.
- 2. Check emails for legitimacy before clicking a link or replying. Right-click links that appear suspicious to see if they are legitimate.
- 3. Use two authentication options such as password protection and fingerprint on all mobile devices.
- 4. If using the browser, click on the History tab and clear the data every time you leave your device.
- Be sure to load security software on your devices, read the reports, and sign up for security alerts from your software.

healthcare organizations with security breaches, McLeod and Dolezel matched those organizations with a list of factors from a HIMSS database. Aggregated from more than 6,000 healthcare organizations, factors included operating budgets, number of physicians using a pharmacy order entry system, number of part-time or contract employees, amount of money spent on security, number of patient beds, Wi-Fi use, and more.

After analyzing and matching the data, McLeod and Dolezel identified a list of factors that were consistent in the security breaches recorded in the HHS file. Those factors included the number of affiliated physicians working at the organization (the higher the percentage, the greater the risk); items related to technology, such as barcode readers; the number of births; the

Continued on page 34

Computer science faculty research security of networks, computing systems



Using game theory to study systems

Dr. Mina Guirguis is a professor of computer science at Texas State University. His research is driven by the interplay of security, networks. and stochastic (random) control with research contributions in the areas of cyber-physical systems (CPS), networks and computing systems, and mobile cloud computing.

Guirguis is the director of the Intelligent Security Group. His research and educational activities are funded with more than \$3.3 million in grants. In 2012, he received the National Science Foundation CAREER award.

"My research work focuses more on decisionmaking in adversarial environments — in which an attacker and a defender interact through a series of decisions. We use game theory and decision theory to study problems in cyber-physical systems, the Internet of Things, and cloud computing," he says.

"In the near future, vehicles will be making decisions based on communications with each other and with the infrastructure. Drones will be delivering packages and even our meals in some restaurants. Our buildings will be making smart decisions regarding power consumption, distribution, and generation. Realizing the vision for CPS will require fundamental new theories that coherently integrate security, networks, and control."

On the web: userweb.cs.txstate.edu/~isl/

Continued from page 33

number of staffed beds; operating expenses; and the facility's age

While these factors may help manage cybersecurity risk Dolezel says, the Health Insurance Portability and Accountability Act of 1996 (HIPAA) should serve as an organization's foundation for securing data. HIPAA requires organizations to develop and implement a risk management plan to protect patients' data.

"Oftentimes, a risk management plan is developed," Dolezel says, "but it is not implemented completely or monitored to see if it is doing the job it is meant to be doing: furthermore, upgrades to the security system may not get completed, providing opportunities for breaches to occur.

"It also comes down to human error. For example, most businesses and organizations, even in healthcare. allow employees to use their own electronic devices such as iPhones and laptops, and these can create big holes in a security system. Without proper security training,

Protecting protocols in sensor devices

Dr. Qijun Gu, an associate professor of computer science at Texas State, looks into research that covers networks, security, and telecommunications. His current projects include vulnerability in sensor applications, authentication in ad hoc and sensor networks, and security in peer-to-peer systems. He explains that his research involves biometric data with the potential to be hacked. His goal is to protect the protocols of these devices and the software.

"My research in general is on security for any kind of embedded devices; some is directly related to the health of the human body," he says. For example, he mentions insulin pumps controlling daily injections that have the possibility of being hacked; or small computers such as smart watches that send data to other devices.

Some of his recently published articles include: "A Consumer UAV-based Air Quality Monitoring System for Smart Cities," "Transient Clouds: Assignment and Collaborative Execution of Tasks on Mobile Devices," and "Collaborative Task Execution with Originator Data Security for Weak Devices."

Gu teaches undergraduate and graduate students in computer systems security and cyberspace security.



employees are not aware of the risk they present just by using their personal devices at work. IT security training should be conducted once a year," Dolezel says.

"There are a lot of human elements to data breaching," McLeod agrees. "In fact, we can fix the technology pieces much easier than we can fix the human errors, and it takes education, which the organization has to provide."

As the two professors continue to research the cybersecurity risk of health information, they hope to

make students aware of what's happening in their growing field. Currently, Texas State offers bachelor's and master's degrees in Health Information Management.

With a growing need for more cybersecurity professionals, McLeod says that Texas State is exploring a multidisciplinary Healthcare Privacy and Security Initiative with departments across the university. Together, these departments will work toward future resolutions. 🔮

TEXAS SCHOOL SAFETY CENTER

Providing research, technical assistance, and information for K-12 schools, junior colleges

By Catherine Duncan





n May 18, 2018, the horror of a school shooting forever changed Santa Fe, a town of approximately 13,000, about 35 miles southeast of Houston. A 17-year-old student opened fire on his campus, killing 10 people and wounding 10 more.

For the first time in Texas, a mass shooting at a high school became a reality, reminding residents that no community is immune to this all-too-common tragedy. Texas' low incidence of violence in a school setting may be the result of state legislators' foresight in 1999 when legislation — which followed the April 20, 1999, Columbine High School shooting near Littleton, Colorado — created the Texas School Safety Center (TxSSC), a university-level research center at Texas State University.

Center director **Kathy Martinez-Prather** explained that TxSSC is tasked in Chapter 37 of the Texas Education Code and in the Governor's Homeland Security Strategic Plan to serve as a clearinghouse for the dissemination of safety and security information, including research, training, and technical assistance for K-12 schools and community colleges throughout Texas.

"Every day, schools face hazards that have the potential to impede the learning process. However, with proper planning and regular training and drilling in emergency procedures, schools can effectively respond in a way that increases positive outcomes," Martinez-Prather says. "We don't want to ever become complacent in our work. Santa Fe reminded us that this center's mission must remain a priority for the state of Texas and its students."

Through robust online resources and inperson courses, TxSSC addresses all aspects of school safety and security relating to K-12 schools and junior colleges. The center strives not only to prevent school violence but also to prepare school personnel to respond to any emergency, assist schools in conducting safety and security audits, and provide resources on topics such as internet safety, reducing the impact of tobacco, and bullying prevention. The center also provides specialized training to school-based law enforcement officers.

Preventing tragedies

This year, TxSSC offered several workshops focused on behavioral threat assessment, which is recognized as a best practice for preventing

Every day, schools face hazards that have the potential to impede the learning process. However, with proper planning and regular training and drilling in emergency procedures, schools can effectively respond in a way that increases positive outcomes."

Kathy Martinez-Prather
 Director, Texas School Safety Center

school violence. "Threat assessment in schools is a process to identify a student who poses a threat — whether to harm himself, herself, or others. This involves a multidisciplinary team of school personnel working to gather information and determine necessary interventions and long-term management strategies for a student. It's critical that schools are regularly receiving training so that they are implementing the threat assessment process with fidelity," Martinez-Prather says.

A threat assessment team should include individuals such as the principal or assistant principal, a law enforcement officer, and a school counselor or external mental health professional, she says. "The TxSSC has developed a tool kit and is offering several one-day workshops to present the step-by-step process for addressing potentially dangerous behavior in school or that could impact a school." The workshop teaches participants how to respond to threatening and disturbing behavior, gather additional information, make an assessment, and take preventive steps if necessary.

Auditing safety

The Texas Education Code requires school districts to perform a safety and security audit every three years. TxSSC has developed a safety and security audit tool kit, which provides a

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model process and resources to help districts assess safety and security issues on each campus. The center creates a statewide report every three years using the results of these self-assessments, Martinez-Prather says. Their work has not gone unnoticed. In February, the TxSSC was awarded a Texas Partner for Change award by the Texas Council on Family Violence.

"Because Texas is such a huge state, we have a range of school districts located in communities from small rural towns to major urban cities; therefore, safety and security standards must be scalable to the existing resources within every school district. A part of the audit is assessing resources and capabilities before an incident occurs," Martinez-Prather says.

The goal of the safety and security audits is for schools to identify strengths and weaknesses in their operations and take corrective actions. The audit process should be an ongoing assessment for schools and not seen as a one-time event every three years.

Managing emergencies

The education code also requires each school district to have a multihazard emergency operation plan in place. "A multihazard emergency operations plan involves identifying the threats, hazards, and vulnerabilities that impact a school district and developing a plan to prevent/mitigate, prepare, respond, and recover from an incident. Plans should be developed with local first responders and other external partners." she says.

Once the plan is created, schools are responsible for training staff and students and conducting drills to ensure that all members of the school community and first responders are prepared to respond effectively to potential emergencies.

Information on training and events

txssc.txstate.edu/events/

Performing research

Martinez-Prather says it is rare to find a state's safety center based at a university. "It's important that the training and resources we provide are informed by best practice. We currently have a four-year research grant, funded through the National Institute of Justice, to study policing in schools. This research will help inform how to best incorporate law enforcement officers into the educational setting that leads to positive outcomes for students and overall safety and security for the campus.

"School policing is a very specialized field. We provide training to school-based law enforcement officers that focuses on all the issues they deal with in an educational setting — most importantly how to build relationships with students," she adds.

"The center is a resource for all schools and community colleges throughout the state." Martinez-Prather says. "It's important that schools continue to make school safety a priority and a part of the educational agenda. We know that students who feel safe in school thrive academically and socially. Although school shootings are rare, they are high impact. We must continue to implement best practices to prevent these types of incidents from happening; our students deserve this." •

VIRTUAL REALITY TRAINING **HELPS FIRST RESPONDERS**

Texas State and Austin-Travis County develop technology that saves time and money

By Julie Cooper



n interdisciplinary team of Texas State University faculty and students is he ping to train first responders using augmented reality (AR) and virtual reality (VR) through Just-in-Time VR Training.

Working with the Austin-Travis County EMS (ATCEMS), the Texas State group developed a VR training system that helps medics learn about the AmBus, a 20-bed ambulance The system allows EMTs to train any time in their station house.

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The Austin AmBus is currently one of 13 in Texas with more expected to be added in 2019, says ATCEMS Commander Keith Noble. "The new ones are not buses at all but big tractor-trailers." The AmBus has been used for recent mass casualty or large-scale disaster evacuations including Hurricane Harvey, and flooding that impacted a Buda nursing home.

It all began three years ago when Travis County started looking for ways to improve training for EMS cadets. At the same time, they wanted to control costs. They held an internal competition with a \$5,000 grant for the winning suggestion. Noble worked with one IT team from the city of Austin to use 360-degree cameras in the training process. EMS Chief Ernesto Rodriguez was part of a team looking at VR. "The idea was, what can we learn from VR training with AmBus? We don't get to use it often and there is a lot of equipment on it," Noble says.

Next, a Texas State team led by Dr. Scott Smith, associate professor in the School of Social Work and director of the Virtual Reality and Technology Lab, joined the project. The university team also includes Dr. George Koutitas, Ingram School of Engineering and director of the X-Reality

On the web

augmentedtrainingsystems.com/ambus/

Research Lab; Grayson Lawrence, School of Art and Design; Dr. Vangelis Metsis, Department of Computer Science; and Dr. Mark Trahan, School of Social Work. City of Austin team members include Ted Lehr, IT data architect; Marbenn Cayetano, IT business systems senior analyst; and Charles Purma, IT project manager.

Explaining how VR and AR differ, Koutitas says: "In AR you see a virtual environment that is overlaid in the form of a hologram on the physical environment or space. This provides the advantage of improving the physical memory during the training.

"Putting a VR headset over your eyes will leave you blind to the current world but will expand your senses," Koutitas says. He explains that augmented reality takes the current reality and enhances it essentially augments it - with a holographic world. "My role is to learn about the needs for training and build an AR training platform application to help the first responders in their mission, which is to

In AR you see a virtual environment that is overlaid in the form of a hologram on the physical environment or space. This provides the advantage of improving the physical memory during the training."

- Dr. George Koutitas

Ingram School of Engineering and director of the X-Reality Research Lab

save lives."

Where traditional training can take weeks, AR training can be completed in a few days. The cost of training one class of 80 cadets on the AmBus in the traditional way is more than \$50,000 and could take weeks. VR/AR training can be completed in four days for much less money. It is also possible this kind of training can be used in other areas such as hazardous materials, hospital emergency rooms, and fire rescues.

The plummeting cost of the VR equipment has also aided the success. Smith points out that a few years ago, a headset could cost \$30,000. Today, an improved model sells for less than \$700. He estimates that in a few years such a headset could be the size of a pair of glasses.

The success of the first tests has been very encouraging. "Not only was our training more effective in reducing the amount of time it took, but they didn't have as many errors as the traditional group," Smith says.

Texas State students were also part of the project. "They did everything," he says. "Design, develop, collaborate. It was really cool to watch them. They got the most hands-on experience they've ever had developing a project."

With AR, the designers have re-created the interior of the AmBus, down to the exact number of steps an EMT would take to find supplies within the bus. VR students included lead developer and lab coordinator Clayton Stamper, James Bellian, Dante Cash, and Elijah Gaytan. The AR students included Shivesh Jadon, Chaitanya Vyas, and Shashwat Vyas.

"I joined the group because it follows two of my research paths," says Lawrence, associate professor of communication design. "One is interdisciplinary collaboration — as designers, we are working with developers, business people, and engineers — the other is the user experience. That's studying how people interact with software."

Recent Texas State graduates Jose M. Banuelos and Kayla Roebuck taught themselves 3D modeling over one summer to be part of Lawrence's communication design team. Sophomore Chloe Kjosa joined their team because of a love of drawing and video games. Lorena Martinez (B.F.A. '18) helped



recruit students to work on the AmBus project, gathered data, and worked on the first prototype.

In November, key members of the ATCEMS experienced VR training at the Austin Fire Academy. After putting on the headset, Rodriguez saw the interior of the AmBus as he walked the length of a hallway. He opened and closed the fingers on one hand to open and close drawers on the AmBus. Koutitas then instructed the chief to locate various medical supplies. As he moved about, the chief was asked to describe what he was seeing: "I am looking at the bus, I see A/C controls and oxygen masks," he says.

The people behind the Just-in-Time VR Training are taking their project on the road — including Smart Cities/Innovator's conferences in Kansas City and Las Vegas, emergency healthcare conferences in Texas, and a technologies conference in Greece.

"We are proof that this kind of interdisciplinary collaboration works — electrical and computer engineering, social work, and design," Koutitas says. "We collaborate on the research and the product that has an impact on people's lives." •

(news) & notes



"My community policing vision focuses on community engagement and relationship building with both internal and external stakeholders. I strive to strike a collaborative tone and hope to work closely with Student Affairs to best meet the needs of our students in all aspects."

 Chief of Police Laurie Clouse, who jo ned Texas State in February

Increased safety measures on campus

- More campus lighting
- Improved classroom security
- Improved emergency communications
- More police foot and bike patrols added to campus
- Bobca: Shuttle extended hours during f nals from 10:50 p.m. to 2:30 a.m.
- Bobcat Bobbies recently added a six-passenger vehicle. They provide escorts on campus from dusk to 1 a.m., seven days a week. Call (512) 245-7233.
- The Bobcat Guardian app has a safety timer, call button, and profile.

Online

University police department: police.txstate.edu

New degrees, minor for fall 2019



The Texas Higher Education Coordinating Board has authorized Texas State University to offer several new degrees with enrollment set to begin in fall 2019:

Master of Science degree with a major in data analytics and information systems

Offered by the Department of Computer Information Systems and Quantitative Methods in the McCoy College of Business Administration.

Master of Science degree with a major in marketing research and analysis

A first in the region, and only the second university in Texas to have a master's degree that focuses on marketing research. Marketing research and analysis are used by companies to link information about products, customers, and markets to financial metrics like sales, margin, and earnings before interest, taxes, depreciation, and amortization.

Bachelor of Science in civil engineering degree

The first in Texas with a holistic emphasis on technology-enhanced infrastructure was approved in May 2018 by The Texas State University System Board of Regents. This fall, Texas State will begin offering the civil engineering program through the Ingram School of Engineering.

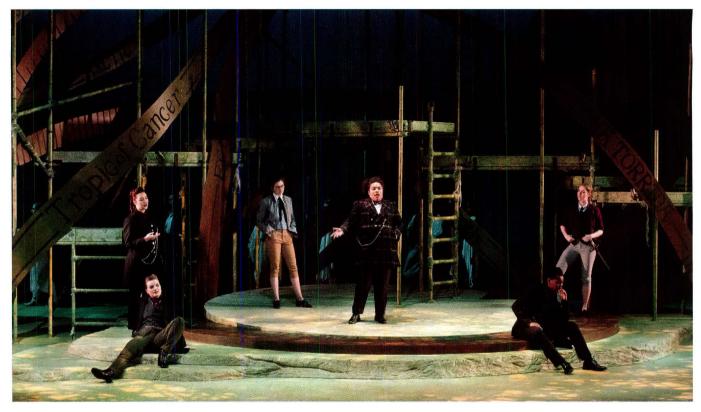
Bachelor of Science degree with a major in health sciences

The Board of Regents has authorized Texas State to offer this new degree. which will help address the state's growing demand for health managers.

Minor in African American Studies (AAS)

The interdisciplinary AAS minor will provide students a deeper understanding of the African diaspora, as well as the complex history, culture, and contributions of Africans and African Americans to our society. The minor will be centered on history and culture and will add breadth of educational opportunities offered to all students.

The Tempest



The Tempest by William Shakespeare blew into the Performing Arts Center in February. The play, featuring an all-female cast, tells the story of an exiled duke cast away on a magical island. Director Bruce Turk is a graduate student pursing an M.F.A. in directing.

Texas State Bands Centennial Celebration

The Centennial Celebration of the Texas State Bands will kick off in September with a special Bobcat Marching Band performance and conclude in May with a gala event in the Performing Arts Center. These are the musical events to enjoy in 2019.

September 7

Bobcat Stadium, Marching Band and Bobcat Alumni Marching Band Centennial Show

October 2

Evans Auditorium, Concert Band, Matthew Holzner, conductor

October 3

Evans Auditorium, Symphonic Winds, Dr. Kyle Glaser, conductor

October 4

Evans Auditorium, Wind Symphony, Dr. Caroline Beatty, conductor Centennial commission world premiere by Daniel Montoya Jr.



November 20

Evans Auditorium, Corcert Band, Matthew Holzner, conductor Certennial commission world premiere by Richard Hall

November 21

Evans Auditorium, Symphonic Winds, Dr. Kyle Glaser, conductor Centennial commission world premiere by Jack Wilds

November 22

Evans Auditorium, Wind Symphony, Or. Caroline Beatty, conductor

New student health center opens

Student Health Center – Thorpe Lane, at 1347 Thorpe Lane, is the new clinic that provides primary care and sports medicine for Texas State students.

The clinic, a partnership between Athletics and the Student Health Center, is staffed by Dr. Bryant Frazier, a full-time licensed physician. The clinic is a short walk from two Bobcat Shuttle Route 10 stops: Uptown Square and Summit. Free patient parking is also available.

This is the third student health center for Texas State students. There is a center at 298 Student Center Drive on the San Marcos Campus, and the Round Rock Campus has a health center in the Nursing Building, Room 116.

The Thorpe Lane clinic operates Monday through Friday. All students may access services by calling (512) 245-2161 to schedule an appointment.

Planned and reinvented

The evolution of Ann Stevens — San Antonio's biomed visionary

By Cheryl Van Tuyl Jividen



I entered the world of big business without even realizing it, shifting almost seamlessly from the journalism career I trained for in college into the field of corporate communications.

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Ann Stevens

The daughter of two university English graduates, Ann Stevens (B.A. '72) was immersed early on in reading, writing, and education. "It was almost preordained that I would become a communicator," Stevens says.

When her father joined the English faculty at Texas State University, Stevens was editor of the high school newspaper and worked summers at the San Marcos Record. Studying journalism at the university was "a calling," as was serving as managing editor of the University Star. After graduating with honors in three years, Stevens launched her reporting career for newspapers in Big Spring and Abilene.

Nepotism rules forced Stevens to make the first of several career changes when her fiancé joined the San Antonio Express-News. Unable to work together and unwilling to work for the competing newspaper, Stevens altered her career path. "I began to reinvent myself by taking a job at the corporate headquarters of Harte Hanks, the San Antonio-based media company that owned both newspapers where I'd started," she says. She found working with management of a publicly traded Fortune 500 media conglomerate came naturally. "I entered the world of big business without even realizing it, shifting almost seamlessly from the journalism career I trained for in college into the field of corporate communications."

In 17 years at Harte Hanks, she took on additional responsibilities in the field of investor relations, the blend of corporate and financial communications for companies with publicly traded stock.

Her next reinvention came at the suggestion of a professional contact who thought Stevens was a good match for a cancer drug development company called ILEX Oncology. It had just gone public and was seeking an investor relations director.

Her experience helped her get the job and make a big biotech jump. "Though I'd changed jobs before, it had always been within the media industry that I trained for in college. ILEX represented my first big leap of faith into a new, science-based field that I knew precious little about and had to learn from the ground up." She fostered media contacts, promoting the company stock and the management team's ability to bring new drugs to approval and market. Eight years later, as it was about to get its second leukemia drug approved, the company was acquired for \$1 billion.

At the height of the company's success, Stevens found herself out of a job with few similar prospects in San Antonio. Recognizing the need to transfer her skills and experience to a different position, she worked with a life coach who stressed the need to stay visible with the local business community while weighing her options.

As an active volunteer with the San Antonio Chamber of Commerce, serving on its healthcare and bioscience committee, she was accepted into the yearlong Leadership San Antonio program as its first biotech professional. She also crafted a personal mission statement along with a job description for a biotech economic development specialist. "I wanted to grow more ILEX's so that industry professionals like me would have more options on where to work and so San Antonio could participate more fully in this exciting industry of the future!" she says.

At that time, Henry Cisneros, former mayor of San Antonio, launched an idea at the chamber's annual Economic Outlook Conference to create a nonprofit organization, BioMed SA. It would promote and grow the city's largest industry sectors — healthcare and bioscience. Stevens was hired in 2005, following a national search for founding president.

"For the past 14 years I've played a role that makes full use of my communications skill set," Stevens said. "My job allows me to use my biotech industry knowledge and passion to help San Antonio diversify its economy by creating well-paying, knowledge-based jobs, and translating academic discoveries into new therapies to make lives better here and around the world."

Honored as a Distinguished Alumna in 2013, Stevens credits her Texas State education as the foundation for her career successes and remains connected to the university, as a donor and through advisory roles within the School of Journalism and Mass Communication and the Department of English. Over 20 years ago, she endowed the David R. Stevens Memorial Scholarship for graduate students of English while honoring her father's memory and contributions.

Stevens and her husband, David Cordova, an advanced manufacturing quality engineer, enjoy watching movies, working out, rooting for the San Antonio Spurs, and spending time with family in Central Texas.

Stevens is leading BioMed SA into the future with a newly developed action plan to continue growing one of San Antonio's largest industries, building on the community's role as the "home of military medicine," as well as five key disease areas in which San Antonio's biomedical sector has unique assets and recognized strengths: diabetes, infectious diseases, cancer, neurological disorders, and trauma/wound healing/regenerative medicine.

"I never imagined becoming a nonprofit leader or an advocate for science, yet BioMed SA has become the perfect vehicle for realizing my hopes and dreams both for my own career and for the community I love," she says.







Roger Estrada

Love of art, old movies leads to a creative career in Hollywood

By Tricia Despres

Roger Estrada (B.F.A. '85) was just two weeks from graduation at Texas State University. It was a time of celebration and fellowship. A time when Estrada was on the cusp of making one of his greatest dreams come true.

There was just one problem. That problem was food poisoning.

"I went to dinner with friends and got very sick, so sick that I was sent to the hospital," recalls Estrada. "My parents drove up with chicken soup, but I was so weak. I had no idea if I would be able to walk across that stage." He did, with his head held high.

It was never a given that Estrada would have an opportunity to attend college, much less earn a degree. The youngest of three boys, Estrada grew up in a loving family in San Antonio. He spent Saturday afternoons at his grandmother's house, watching old black-and-white movies that featured characters such as King Kong, Abbott and Costello, and Shirley Temple. Eventually, his enthusiasm for vintage film and television would evolve into the pursuit of art.

Since graduation, Estrada has worked for several entertainment industry giants, including Sesame Workshop, DreamWorks Animation, Nickelodeon, and NBCUniversal. Most recently, he was a senior vice president in the creative department of Sony Pictures Entertainment, where he led the consumer products design and development team to support global consumer marketing strategies. He was involved with producing assets for such movies as Hotel Transylvania, Ghostbusters, Jumanji, and Peter Rabbit.

"I'm the first person in my family to graduate from college," Estrada says. "My eldest brother, who is very quiet and stoic, took me aside to tell me how proud he was of me. That was a great moment and one I will never forget."

Estrada also remembers the beauty of the campus and the Hill Country. "There was such a good energy there. It was an exciting time of my life," he says. Estrada was also involved with publications such as *Hillviews*, where he interned during his junior year. "At the same time, I was also taking production classes where we did everything by hand. I just loved that."

He also loved the insight, the direction, and the inspiration he received from the School of Art and Design. "I had many teachers with amazing words of wisdom that wouldn't fully resonate with me until later in my career," he says. "One of my

favorites was a teacher named Martha Durke (B.S. '74), who told me that 'no matter what the task is before you, just deal with it.'"

Recently, Estrada left Sony Pictures and is contemplating the next step in his professional life. He still makes his home in the Los Angeles area, and while interviews look promising with companies such as Google, Facebook, and Universal Studios theme parks, he says there is no rush.

"My mind has always been propelled by beauty and creativity," says Estrada, who took a part-time job with *Texas Monthly* magazine shortly after his graduation. "I've also always been open to all ideas, no matter where you are in your career."

Today, he is looking forward to starting a new chapter. "I know I will definitely continue my pursuit of entertainment arts and I feel like the world is my oyster at this point."

Just like he learned at Texas State, he will never give up. "I will never lose the faith I have in myself," he says. "No matter what happens next, I am prepared to deal with it."

Estrada has worked for several entertainment industry giants, including Sesame Workshop, DreamWorks Animation, Nickelodeon, and NBCUniversal. Most recently, he was a senior vice president in the creative department of Sony Pictures Entertainment, where he led the consumer products design and development team to support global consumer marketing strategies.

Dalinda Gonzalez-Alcantar

McAllen native has a flair for business, a knack for coding, and a passion for problem-solving

By T.J. Garcia Photo by Delcia Lopez

Rise and grind. It's more than a motto—it's a lifestyle for Dalinda Gonzalez-Alcantar, who put the empowering slogan on a T-shirt she sells on her boutique site, alablanca.co. It shows the playful side of this educator, entrepreneur, and mother of two.

The marriage of creative design and business savvy that has defined Gonzalez-Alcantar's impressive career began its courtship at Texas State University where she earned a bachelor of fine arts degree in 2004. It wasn't the only match made on campus — it's also where Gonzalez-Alcantar met her husband, Marco Alcantar (B.S. '06).

Fifteen years since graduating, and leaving Lantana Hall, she still reflects on lessons learned in San Marcos — lasting instructions on leadership, life, and even love. From serving as a youth minister with Baptist Student Ministries to designing artwork for the *University Star*, Gonzalez-Alcantar found her place among young leaders on campus.

"Texas State gave me a lot of opportunities. It offered me my first real glimpse into diversity and I really loved it," she says. Today, she is a member of the university's Development Foundation Leadership Council.

In her native Rio Grande Valley, where she lives with her husband and two children, Gonzalez-Alcantar is CEO of the McAllen Boys & Girls Club. It's a culmination of her vocation and avocation — her talent for innovative problem-solving and her passion for it. It's a strength for which she credits an unexpected source: her art education.



"I believe 100 percent that business people should be required to take some kind of art class. It forces you to look at things in a different way. It helped me become a better problem solver," she says. "Being an art major at Texas State allowed me the opportunity to get out of my box and I never really got back in."

Through her various endeavors. Gonzalez-Alcantar sees the world as a kaleidoscope of opportunities, each richer and more complex than the last. Returning to McAllen as an educator for college and career readiness, she discovered a lack of resources to learn or teach technology and the coding language that's critical in preparing young people for tomorrow's workforce. She turned the challenge into a prospect. "When I moved home to the Valley, I started to understand the whole digital gap that exists here and a new inequity that exists - access to information equality," she says. "That's what led me to build the app."

With no previous training, Gonzalez-Alcantar developed e Jucomm, a technology startup that was acquired by San Franciscobased Campus Orb. "I learned how to build apps online and, truth be told, I couldn't pass a math class at Texas State. So, don't let people tell you that you can't be good at technology," she says. "I failed math three times and I built an app!"

eJucomm was designed to serve
K-12 students and school districts with a
focus on bringing families together in the
learning space. "I feel like I birthed two
things at the same time: my daughter and
my business," Gonzalez-Alcantar says. "I
remember watching YouTube videos while I

breastfed her. I'm taking notes with my left hand and thinking, 'You must be crazy!' "

Crazy to take on so much at once?
Maybe. Inspired? Definitely. "Learning to code and developing this business gave me a platform to tell my story and connect kids and families," she says. Her desire to create connections to modern learning resources for students and families also led to her co-founding Border Kids Code, a startup dedicated to increasing upward social mobility by engaging children of color with technology learning experiences. That led to a connection with Code the Town, a partnership with the Mission Economic Development Corp. Those roads eventually brought her to the Boys & Girls Clubs.

"I had no intention of leaving public education, but I was approached with this opportunity," she says. "At the time, I had no idea what potential the Boys & Girls Clubs had, what we could leverage in the Valley and in our community, but once I did, I was all in. I realized that I had a lot to give and to serve in my community with what I learned at Texas State."

In her work today, as in her life, Gonzalez-Alcantar lives by a new mantra: Deliberate actions fulfill the mission. It helps her focus on being mindful and purposeful in all you do.

"I feel very responsible for my community and I feel extremely responsible to move people forward," she says. "It all stems from this idea that I have. I believe one person can really change the world and I try to live that out every single day."



Cody **Taylor**

By Travis Poling

With Industry in San Marcos, restaurateur is taking his career to the next level

On a busy day at Austin's well-known Café Josie or at Industry, a new San Marcos restaurant, Cody Taylor (B.A. '09) is just as likely to be busing tables or washing dishes as he is working at the front of the house.

That work ethic, and the desire to make people happy, is what turned this Texas State University graduate into a successful restaurateur.

"I like taking care of people," says Taylor, now 37. Growing up in the South Texas town of Goliad, he worked at a restaurant owned by his father's friend. Later, he worked in restaurants to pay his way while attending community college.

Taylor tried other professions on for size, but eventually returned to restaurants. "There was a year I worked in Mississippi in the oilfields - doing title research as a 'landman' - and I spent a semester trying to sell vitamins," he says.

At 19, Taylor discovered a new aspect of the restaurant world at a Bryan eatery. "I didn't realize that I was in love with the business until I worked at Café Eccell with my first chef. There was something about the level of respect they demand. The way they work with flavors and the logistics of how they did it just blew me away," Taylor recalls. "You start to see the artistic component of what it means to be a chef. I realized then, there is a story behind each dish and process."

The experience didn't drive him into culinary school, but it did set the stage for his later return to restaurants throughout his college years in College Station, a brief stint in Canada, and finally to Texas State, where he graduated with a degree in international studies.

Back in Austin, Taylor joined Café Josie, an established restaurant by wellknown chef Charles Mayes. After going from waiting tables to becoming assistant manager, he went beyond working the front of the house to learn the other parts of the business, including bartending and wine buying. The restaurant was closed on Sundays, so Taylor used the quiet dining room to study for classes and avoid football and friends.

"He demonstrated efforts, insight, and success beyond the usual," says Mayes, an Austin restaurateur since 1979 and owner of the new Cielo Bistro Mexico. "Cody had some experience and had an active mind. He respected people and he did everything with lots of positivity."

Mayes says he was able to step back from overseeing the entire restaurant operation and focus on the kitchen. "Before long, I just turned over the whole front of the house to him. He never failed me," Mayes says.

The seed for owning Café Josie was planted in 2007 when Taylor mused about one day having his own restaurant. "I flippantly said, 'Play your cards right and you could own this one," Mayes says. As the economy went into recession, Mayes told Taylor it wasn't the time for him to buy, but he would know when the time was right.

On Valentine's Day 2012, business at Café Josie was trending up from previous years. Mayes recalls that Taylor sidled up and said, "Is this it?"

Eight months later, Taylor took ownership of the restaurant. "This restaurant is named after my daughter. I wasn't going to sell it to just anybody," Mayes says.

Taylor says there were still tough times ahead for the restaurant, but it eventually turned the corner and thrived. "It's gone through cycles where I've had to pay myself last or not at all," Taylor says. "Sometimes you have to keep your head up."

Success brought new opportunity with the 2018 opening of Industry in San Marcos. Mark Shields, an Austin-area real estate investor and developer, was one of the original investors in Café Josie and dined there frequently. When he was looking for a tenant for a project in San Marcos, he contacted Taylor about possible interested parties. Two months later, Taylor asked if he could be the tenant.

Taylor soon moved to San Marcos to begin the process of launching Industry. "He's a genuine guy who cares about what he does," Shields says of Taylor. "He's really on the ball (getting involved in San Marcos) that way. He knows he needs to stay in touch with the community."

Industry, an homage to people working in the restaurant and hospitality industry, also lives up to its name with clean lines and an industrial look. Handmade tables of gleaming polished natural wood, however, create an intimate feeling. In February, an expansion of Austin brewery Hops & Grain opened next door with Industry serving as the tasting room's official food provider.

Taylor's love for the restaurant industry and the people who work in it drive his philosophy. "It's a team sport and it's great when it works and you have a good team behind you," Taylor says. He treats the team as a family and has a family-first policy in a business that can have a high rate of turnover. "People tend to stick with me when we work together."

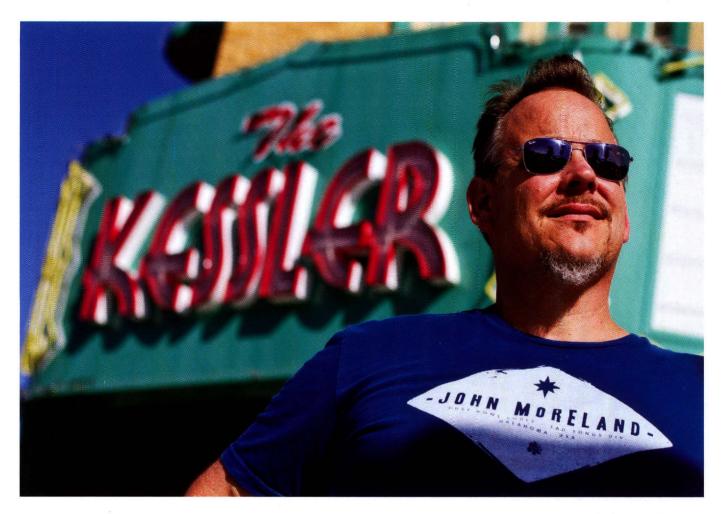


Photo By Mark Graham

Edwin Cabaniss

Entrepreneur turns his passion project into a major force in Texas nightlife scene

By Bryan Kirk

Edwin Cabaniss (B.B.A. '91) is living his best life right now, but then life has always been something of an amazing and wonderful journey for the native East Texan, who now calls Dallas home.

Ten years ago, Cabaniss left a career in finance to concentrate on a passion project and began Kessler Presents, a concert promotion company that has become a formidable player in the entertainment and nightlife scene in three major Texas markets. Cabaniss bought and refurbished the Kessler Theater, transforming the historic Dallas landmark into an updated live music venue and performing arts space. Later, Kessler Presents ventured into Houston with the Heights Theater. He also began promoting shows in Austin.

Not surprisingly, Cabaniss has put several thousand miles on his SUV, bouncing around the state for business meetings and the occasional R&R. Cabaniss owns a 235-acre farm in a rural area strategically located between the three cities. During one of his many treks across the Lone Star State, Cabaniss shared his journey from his East Texas roots to his current position as a livemusic entrepreneur.

This fifth-generation Texan is a byproduct of Sunday church services and Friday night lights — what many consider a proper Texas upbringing. That sort of thing just clicked with Cabaniss, who starred on the football field and the baseball diamond in Longview.

But there was always a creative side to that hometown, too. "There have been a number of highly successful creatives that I grew up around. My next-door neighbor, Porter Howell, formed and still fronts the band Little Texas. He's now a Nashville songwriter with many hits to his credit, including 'God Bless Texas.'

"My childhood friend and classmate, comedian Rodney Carrington, is still the funniest person I know. Of course, Matthew McConaughey's work speaks for itself," Cabaniss says of his fellow Longview High graduate.

When the time came for college, Cabaniss entertained his share of athletic scholarship offers and visited a few campuses. He wasn't drawn to any one place, but all that changed when he arrived at Texas State University. He says he could barely fathom the idea that he could score a baseball scholarship at such an idyllic place and get to do something he loved. "When I stepped on the campus for the first time," Cabaniss recalls, "it just felt right. With the new library being built, a solid business school, and a very competitive baseball program, I knew I had found the right university for me. I signed my scholarship the next day."

Cabaniss focused on his studies and followed the lead of his father and uncles, who had careers in insurance, accounting, and banking. He also fostered a healthy entrepreneurial spirit.

After graduating with a degree in marketing, he moved to Dallas to start his career. Along the way, he earned a master of business administration in finance and his analyst designation from the Wharton School of The University of Pennsylvania.

He had done well in his two decades in finance, but advising others who were looking to turn their own dreams into something concrete always piqued the entrepreneurial side of his soul. "I started thinking to myself, 'I can do that.'"

Cabaniss, who was then on the cusp of 40, started looking for a new direction. "I tell people when they walk into the Kessler Theater, they are standing inside of my midlife crisis," he jokes.

He'd seen the Kessler many times before. The theater portion of the building was boarded up and dormant, quietly decaying for years. At first, it was a real estate investment, but things began to align. His hope was to revitalize an urban area that had long been neglected. By keeping leases with the longtime tenants and filling the vacancies with others who shared his vision to honor the community, Cabaniss was able to maintain the authenticity and culture.

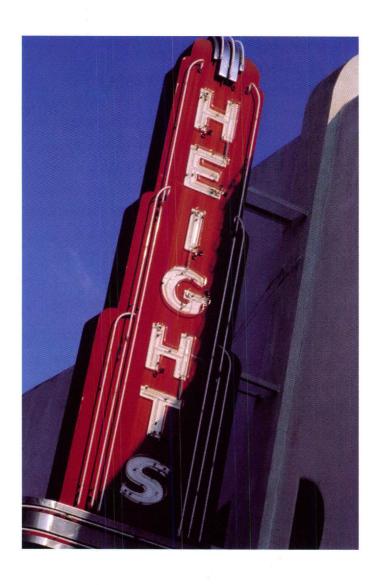


Photo courtesy Visit Houston

The Kessler, which once counted singing cowboy actor Gene Autry among its owners, opened in 1942 and was among the last of the art deco theaters built. It was a special building with a storied history, and Cabaniss wanted to ensure it had a future. "It became the place to attract people back to our neighborhood — the creative class," he says.

The Kessler is considered by many as one of the best small music venues in America, but it also hosts children's classes, charitable events, worship services, and private events. Although it holds a wide range of programming, two factors are consistent — the venue is a destination itself and the house is usually full.

Cabaniss and his wife, Lisa, purchased the Heights Theater in Houston in 2016. Like its sister venue, the Heights has won numerous preservation awards and packs the house. The Heights' daily operations are almost exclusively run by Houstonians, and it has become a vital presence within the community. In the days following Hurricane Harvey, it also served as a base camp kitchen.

Last year, Kessler Presents expanded to Austin, staging shows at historic venues such as Antone's Nightclub and the Paramount Theatre. The company has built a Texas triangle, giving regional and national touring artists the ability to play three of the largest markets in the state on consecutive nights in some of the state's most iconic and picturesque venues. With more than 400 events this year, Kessler Presents is now considered one of the largest independent promoters in the country.

A decade later, Cabaniss credits his home and work families with this creative success. "I think I speak for everyone on our team that this is not just a job, but a passion and a way of life." Much like when he first stepped on the university campus, Cabaniss finds it hard to believe that he has been fortunate enough to launch a business and new career path from what used to be his daydreams. "It's been a beautiful journey, and there's no end in sight."

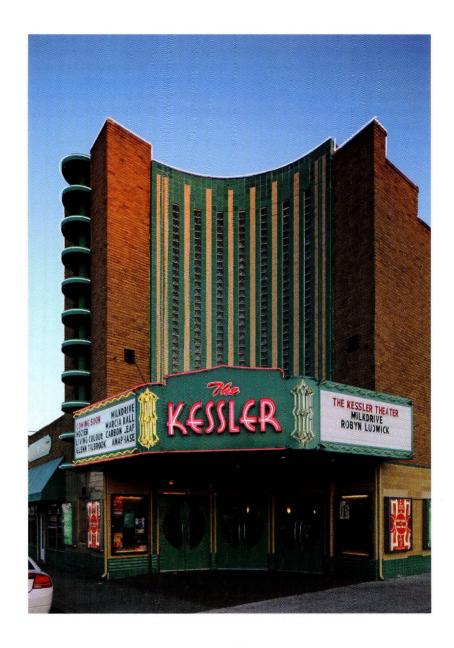


Photo courtesy Richard Davis Architects

In 2009, Cabaniss bought and refurbished the Kessler Theater, transforming the historic Dallas landmark into an updated live music venue and performing arts space. Later, Kessler Presents ventured into Houston with the Heights Theater.

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(class)notes



Jack L. Chisenhall '70

San Antonio, was recently featured in an article at the ClassicCars.com Journal. His company, Vintage Air, supplies aftermarket air conditioning systems for classic cars.

I Chuck Churchwell '70

San Marcos, recently retired after 48 years with McCoy's Building Supply. He started working at a McCoy's store in Austin before moving up the ranks. progressing from accountant to controller in the mid '80s before becoming chief financial officer in the early '90s. In 2001, he was named executive vice president and joined McCoy's board of directors.

Jim Stewart '70

San Antonio, has joined Baird Public Finance as managing director for its San Antonio office. Stewart previously served as managing director of Stifel Nicolaus.

Karen Chisum '72, '78

San Marcos, was named Division I Scuthwest Region Coach of the Year by the American Volleyball Coaches Association. In November, she was named Sun Belt Conference Coach of the Year and led the Bobcats to their first Sun Belt Regular Season Championship with a 15-1 mark in league play.

Send your Class Notes contributions to: hillviews@txstate.edu

Manhattan, Kansas, has been named development director of Mercy Community Health Foundation and Wamego

Salvador "Joey" Lucita '91

Kyle, has been named band director for Johnson High School in the Hays CISD. Set to open in August, Johnson High School is named for William "Moe" Johnson (B.A. '55), the first superintendent for Hays CISD, and his wife, Eugenia "Gene" Johnson.



Wray Johnson '78

Fredericksburg, Virginia, has published Biplanes at War: US Marine Corps Aviation in the Small Wars Era, 1915-1934 (University Press of Kentucky, 2019). Johnson is a professor of military history at the School of Advanced Warfighting, Marine Corps University.

Jim McShan '82

Willis, has been named the 2018 CFO of the Year by the Houston Business Journal. He is the chief financial officer of the University of Houston.

Lisa Fullerton '83

San Antonio, received the Ken Legler Small Business Champion Award from the Texas office of the National Federation of Independent Business. She owns five Auntie Anne's and two Cinnabon franchises in San Antonio.

2 Tina Rockhold '89

Community Health Foundation.



Mark Menn '94

San Antonio, has been appointed regional enforcement supervisor of the San Antonio Regional Office for the Texas Alcoholic Beverage Commission (TABC).

Jacqui Gore '95

Odessa, has been named executive director of advancement at Odessa College. She was previously vice president of communications and marketing at Odessa Regional Medical Center.

3 Dr. Gregory Rodriguez '95, '13

Westbury, Connecticut, has been named deputy superintendent for the Westbury School District. He was previously superintendent of schools for the Carlsbad Municipal School District in New Mexico.

Barbara Traylor Smith '95

Grand Junction, Colorado, has been named National Social Security Advisor of the Year by the National Social Security Association. Smith owns Retirement Outfitters LLC and is mayor of Grand Junction.

Robert Gilbreath '97

Austin, was named senior vice president of marketing for ScaleFactor, an intelligent finance and automated accounting platform. He was formerly with ShipStation.

Chris Hosek '98

Austin, was awarded the DCEO



Magazine Services Innovator of the Year award for his work representing oil and gas clients. Hosek is the principal of Texas State Alliance Energy Solutions.

Brad Holland '98

Abilene, has been named president and CEO of Hendrick Health System. He was previously CEO of Cedar Park Medical Center.

L. Scott Wall '99

Pagosa Springs, Colorado, has been named Archuleta County administrator. He was previously city administrator for the city of Willow Park.

Chance Sparks '04

San Marcos, has joined Freese and Nichols Inc. and will serve as project manager in their San Marcos office. He previously served as assistant city manager and planning director for Buda.

Andrew Peach '06

Coral Gables, Florida, has been named senior general manager of the Shops at Merrick Park. He previously served as senior general manager at Columbiana Centre in Columbia, South Carolina, where he was instrumental in the implementation of \$7.8 million in capital development projects.

4 Ashley Hebler '12

Austin, has joined the Texas Tribune as a front-end engineer. She was previously a developer at Volusion, an e-commerce platform.

IN REMEMBRANCE

Bill Wittliff

The world lost a treasure when Dr. Bill Wittliff, a Texas State Hero, passed away on June 9, 2019. Bill and his wife, Dr. Sally Wittliff, founded The Wittliff Collections at Texas State University in 1986. Texas State is honored to steward Bill's legacy and continue building a world-class archive of the Southwest's most important literature, photography, music, and film. In April of 2020, the inaugural Wittliff Collections Festival will take place in Austin, as a celebration of Bill's inimitable vision and creative spirit.

Author Stephen Harrigan, whose papers are part of The Wittliff Collections, delivered the eulogy at Bill's private graveside service. Following is an abridged version. Read the full text at bit.ly/wittliffeulogy.

Bill Wittliff was, among so many other things, one of the most successful screenwriters in the world. He knew how to braid a confusing tangle of events into a single coherent narrative, or one central theme. I'd like to be able to do that today, but Bill's life was too various, too vast, and too crucial to everyone here that it almost seems like an insult to his memory to try to neatly sum up who he was. There's no one Bill Wittliff story—there's a story for each of us.

And just as there's no one story to his life, there's no one theme. But there are three words that keep cycling through my mind when I think about him and what he meant to me: the three words are integrity, inspiration, generosity.

These three elements of his personality weren't separate, they weren't sequential, they were all bundled together into a human being you instinctively liked and trusted and, maybe at some level, found yourself wishing you could be.

He was someone who was never afraid to say no, but whose door was always open. You knew when you listened to him talk that he came from someplace real, and you knew by every choice he made that he stood for something important. He was a living rebuke to inanity and pretense. He knew what was true, and he was relentless in sniffing out anything that was bogus.

It was certainly his insistence on truth that elevated Lonesome Dove from what could have been a fairly conventional cowboy miniseries to the most beloved

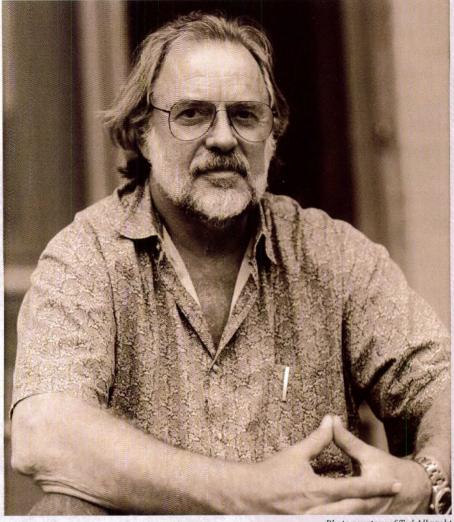


Photo courtesy of Ted Albracht

western ever made. As the project's screenwriter, executive producer, and guardian angel, he made sure the movie was made in a manner that honored Larry McMurtry's novel and protected the adaptation from wrongheaded casting and sometimes boneheaded studio notes. "If we take care of Lonesome Dove," he told everyone involved with the production, "Lonesome Dove will take care of us."

The week before he died, Bill and his wife, Sally, celebrated their 56th wedding anniversary. Sally was his partner in creating the great Texas cultural heritage that lives on through his work and through The Wittliff Collections.

Speaking of The Collections, I want to close with something I read a few days after Bill died. Christian Wallace is a young writer for Texas Monthly. In a Twitter Post, Christian remembered the time he met Bill at a reading at The Wittliff Collections.

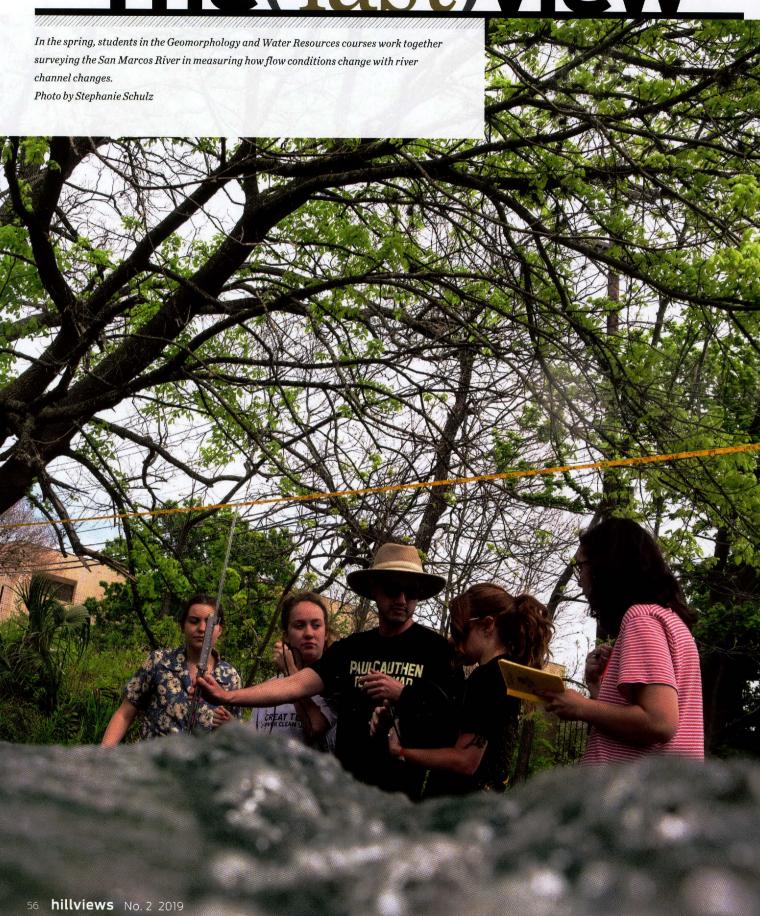
They began to talk about writing, and Bill asked him what kind of writer he wanted to be. Christian gestured toward Pat Oliphant's statue of John Graves that looms over the Collections' reception area.

"A few days later," Christian wrote, "I got a call from someone at The Wittliff. She said they had a package for me. I went by and picked up a manila envelope with my name scrawled across the front. Inside was a rusted horseshoe and a letter."

The letter read "Here's a horseshoe I found out at John Graves's Hard Scrabble the last time I was there... I believe in Luck... now here's some you can take along with you as you go..."

As I said, there's a Bill Wittliff story for each of us. Stories of integrity, inspiration and generosity. And no doubt, we'll all be telling Bill Wittliff stories on into the afternoon, far into the night, and deep into the ages.

The(last)view



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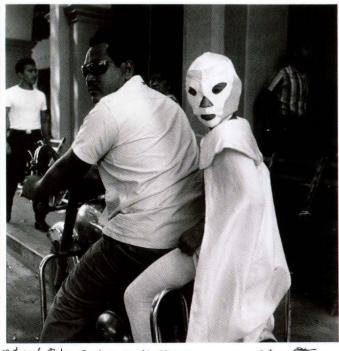
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Motorcycle Riders, Carnival, Mérida, 1964 by Arthur Tress

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ARTHUR TRESS: MEXICO 1964 - 1965

ON DISPLAY NOW

Take a rare look into the early career of noted American photographer Arthur Tress. After graduating from Bard College in 1962 with a degree in painting, Tress traveled extensively, including a lengthy stay in Mexico. There, he studied art and became fascinated with cultural rituals throughout the country. His photography from this time features urban Catholic parades and festivals as well as the spring ceremonies of the Tzeltal people, descendants of the Maya who lived in Tenejapa in the highlands of Chiapas, Mexico.

Tress became best known for his "staged" photographs of carefully composed fantasies, dreamscapes, and other tales from the unconscious. These early images, however, reveal the young artist using a documentary style to capture a wide variety of subjects from the street to the ceremonial, always with a sensitive eye for striking or surprising scenes.

To learn more, visit www.thewittliffcollections.txstate.edu or call (512) 245-7431.