Innovations

THE UNIVERSITY OF TEXAS AT SAN ANTONIO COLLEGE OF ENGINEERING

VOL. 15 | SPRING 2013

NEW FACES OF ENGINEERING:

Professors like Dr. Krystel Castillo exemplify the diversity of UTSA's College of Engineering.

UTSA Engineering

Farewell
For Now...

After almost eight years, Dr. Mauli Agrawal's role as the Dean of Engineering at UTSA is coming to an end. President Romo asked him to step into the role of interim Vice President for Research at UTSA starting May 15th, 2013. In this position he will be reporting directly to President Romo and will be responsible for overseeing and growing UTSA's $78 million annual research and sponsored project enterprise. However, he will continue to be a faculty in the COE and continue to teach and do research.

Over the last eight years the college has achieved much under Agrawal's guidance:

- 54% increase in student enrollment.
- 77% increase in FTE faculty.
- Addition of two B.S., two M.S. and a Ph.D. program.
- The creation of five new centers and two research institutes.
- 102% increase in graduate student enrollment.
- 578% increase in annual research expenditures (from approximately $2 million to nearly $13.6 million).
- More than $16 million raised in donations for scholarships and the creation of several new endowed professorships and chairs.
- Expansion from the Engineering building into the new Biotechnology, Sciences and Engineering and the Applied Engineering and Technology buildings.

"The results of the hard work and dedication of our faculty, staff and students are obvious. I am thankful that I was able to be a part of this incredible journey. I will continue to be part of the COE and work with you as the college continues to rise to its full potential," Dr. Mauli Agrawal said.

ON THE COVER

Assistant professor in mechanical engineering, Dr. Krystel Castillo poses in front of the Vizwall. Castillo's areas of research include Supply Chain Modeling, Optimization: Heuristics and Metaheuristics, Logistics, and Quality Engineering and Reliability. She is one of the newer faculty members of the College of Engineering.

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editorial

A message from the Dean of the College of Engineering

C. Mauli Agrawal, Ph.D., P.E.
Peter T. Flawn Professor
David and Jennifer Spencer Distinguished Dean's Chair in Engineering

Fifty years ago, the stereotypical engineer was a middle-aged white male with a pocket protector. Today, the face of engineering is changing and the stereotypes of what it means to be an engineer are quickly fading. In fact, perhaps the only thing common among engineers is that they are smart, and they have an analytical mind. The diversity among engineers is perhaps nowhere as evident as at UTSA. UTSA serves South Texas and is the heartland of the fastest growing community in the country—Hispanics. As a Hispanic Serving Institution (HSI), UTSA's College of Engineering (COE) clearly reflects this in its undergraduate population where almost 45 percent of the students are of Hispanic descent. The college also has a growing African-American and international representation, and we are very proud of this heritage.

Diversity is not limited to just ethnicity. The College of Engineering has a strong representation of students and researchers from all over the world. On any given day, a visitor to the college can expect to find people from more than 30 countries in its classrooms or labs. For example, Maryam Niknamfar, a graduate student in Electrical and Computer Engineering has come all the way from Iran to study at UTSA. Individuals like Maryam create a rich tapestry of cultures and traditions that promote learning and a wider view of the world. Perhaps the only thing these individuals have in common is a love for engineering.

The changing face of engineering is also reflected in our faculty who come from all over the world and are a celebration of ethnic, gender and national diversity. Dr. Krystel Castillo, an assistant professor in Mechanical Engineering embodies much of this diversity.

It is also true that in the past, people who came from humble socioeconomic circumstances had a hard time becoming engineers because they were rarely exposed to all career possibilities. This too is changing as is exemplified by the story of Tania Hernandez who is studying mechanical engineering.

In this issue you can also read about two great supporters of the College of Engineering, Mr. Ed Whitacre (former CEO of AT&T and General Motors) and Dr. Normam Jacobson, who have both donated funds to establish endowed faculty positions in the COE.

With so much change happening, it will be hard for me to leave. However, after serving as the dean of the college for about eight years, I have been promoted and will be serving as the Vice President for Research at UTSA starting May 2013. During these past eight years, the faculty, students and staff have made great strides and the college is flourishing. But, I firmly believe that the best is yet to come!

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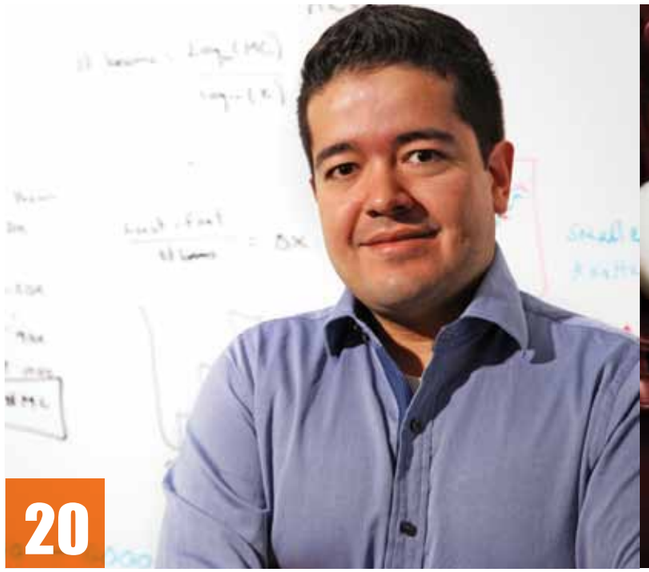

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Maryam Niknamfar has traveled the world over in pursuit of her dreams. Now, she is studying fiber-optic technology at UTSA as a doctoral student hoping to improve the way we communicate.

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No one succeeds in life on their own. There is always someone who provides support, mentoring, or inspiration. For Tania Hernandez, she's able to succeed because her family makes sure failure isn't an option.

NewsBytes

The Art of Predicting Failure

John Foster, assistant professor in mechanical engineering, has won a grant from the Air Force Office of Scientific Research—Young Investigator Program for his project titled "Predictive simulation of material failure using peridynamics-advanced constitutive modeling, verification, and validation."

The proposed research will seek to advance the predictive simulation capabilities for the deformation and failure of engineering materials through development, verification, and validation of new constitutive models within the framework of the peridynamic theory of solid mechanics (peridynamics). Relaxed kinematic assumptions allow the peridynamicmomentum balance to be satisfied even in the face of nondifferentiablity, discontinuities, shocks, voids and other defects in a otherwise continuous body. This allows for a straightforward and mathematically consist way to model material failure and other complex behavior. In the proposed research, new constitutive models that have no analogue in the classical theory will be explored. Starting with the unique development of beam, plate, and shell theories these models may lead to advancements that could describe material behavior not typically found in nature and therefore have implications towards advancements in macro-scale metamaterials modeling. These lower-dimensional structures will be explored in an effort for the problems to remain tractable such that analytic solutions can be developed for verification of numerical simulations. Finally, a validation effort will be undertaken to validate simulations against experiments involving material failure in the context of material uncertainty. Probabilistic techniques will be used to define convergence of computational simulations with respect to distributions of experimental data.

The total award for this project will be $360,000.

First Place at Regionals was a "Steel"

Fresh from its regional first place win, the **UTSA Steel Bridge Team Members** are gearing up for the next round of competition. They are making improvements on their bridge design in order to place higher at the National Student Steel Bridge Competition. Not wanting to be complacent, the team realized that structural improvements can always be made, and what might win at the regional level won't necessarily win at the state level. These modifications include everything from grinding and shaping steel to welding new parts.

The competitions consist of teams designing a bridge that meets the specifications given by American Institute of Steel Construction (AISC). Teams receive the rules in August and immediately enter the design phase. The UTSA Steel Bridge team makes certain to design all members and connections according to rule specifications giving them the best chance to win. Design and structural analysis is done using computer programs such as SAP2000. The bridge must not only be light and sturdy, but it is necessary that be assembled as quickly as possible.

Upon completion of the design phase, the team builds the bridge in the engineering machine shop located on west campus. Using all the tools available, the team welds, cuts, and grinds steel tubing to construct the bridge. After two months of designing and three months of building, the team tests the bridge's strength and practices putting it together in a timely manner. The bridge consists of about 40 members this year with bolted connections. The bridge team is composed of 15 students who come from both the undergraduate and graduate level.

The regional 1st place victory in March is the first overall win since 1997. Prior to this victory, the UTSA Steel Bridge Team has placed second overall in 2009 and 2010.

Inaugural Texas Energy Expo

The UTSA College of Engineering hosted its inaugural **Texas Energy Expo**, a student-run career fair, Tuesday, March 5 in the University Center Ballroom. More than 250 students and alumni spoke with the representatives of the 11 companies in attendance.

Spearheaded and organized entirely by students within the College of Engineering Student Council and the College of Business Student Council, the objective of the career fair was to connect companies operating in South Texas and the Eagle Ford Shale with some of the best and brightest science, technology, engineering, math (STEM) and business students in Texas.

"The Texas Energy Expo provided unparalleled opportunities for students to learn what employers are looking for, in both intern and entry level employee prospects. Companies that participated in the expo experienced first-hand how many highly educated and passionate student leaders we have at UTSA. Since the first expo was such a great success we are now looking into improving the expo and making it an annual event," said Andrew Baines, master's student in mechanical engineering.

To make the event a success and maximize participation, the students solicited sponsorship and participation from businesses in the energy sector. Travis Capp, vice president of Energy and Gases of Valero, was the keynote speaker, and he spoke about the changing landscape of the oil and gas industry.

"This was truly a learn-by-doing event and COE students were quick studies. It was important for them to develop people and management skills that they would not ordinarily learn in the classroom," said Otis Scott, career counselor for the College of Engineering.

Training the next generation of problem solvers, UTSA is consistently producing a diverse group of highly competitive future leaders in the STEM and business fields.

The UTSA College of Business is ranked number seven and the College of Engineering number five in the nation for graduate programs serving Hispanics by Hispanic Business magazine.

"UTSA has come a long way in moving toward Tier One status. We've grown at a tremendous rate and people are starting to take note. We can easily compete with other prestigious schools in the nation. So this expo was another way to show how exceptional our students are," Katherine Parks, sophomore in mechanical engineering, explained.

All proceeds from the expo not used to cover fair costs went to support student organizations, multi-disciplinary senior capstone projects, and student attendance at major national STEM and business conferences.

UTSA's Scope of Influence Goes National

Beth Pollot is well on her way to bringing the national spotlight to UTSA. A doctoral student studying biomedical engineering, Pollot recently became the president of the National Student Chapter for the Society for Biomaterials.

The purpose of the National Student Section of the Society for Biomaterials is to encourage the development, dissemination, integration, and utilization of knowledge in biomaterials among students, and encourage multi-disciplinary interactions among all members of the Society For Biomaterials.

Pollot's duties will include organizing a national chapter meeting, hosting development luncheons, ensuring all chapters within the society are working toward the mission objectives, and to create and nurture an awareness of biomaterials in young engineers and scientists.

New Faculty

Bing Dong

Assistant Professor
in Mechanical Engineering

Ph.D. — Carnegie Mellon University

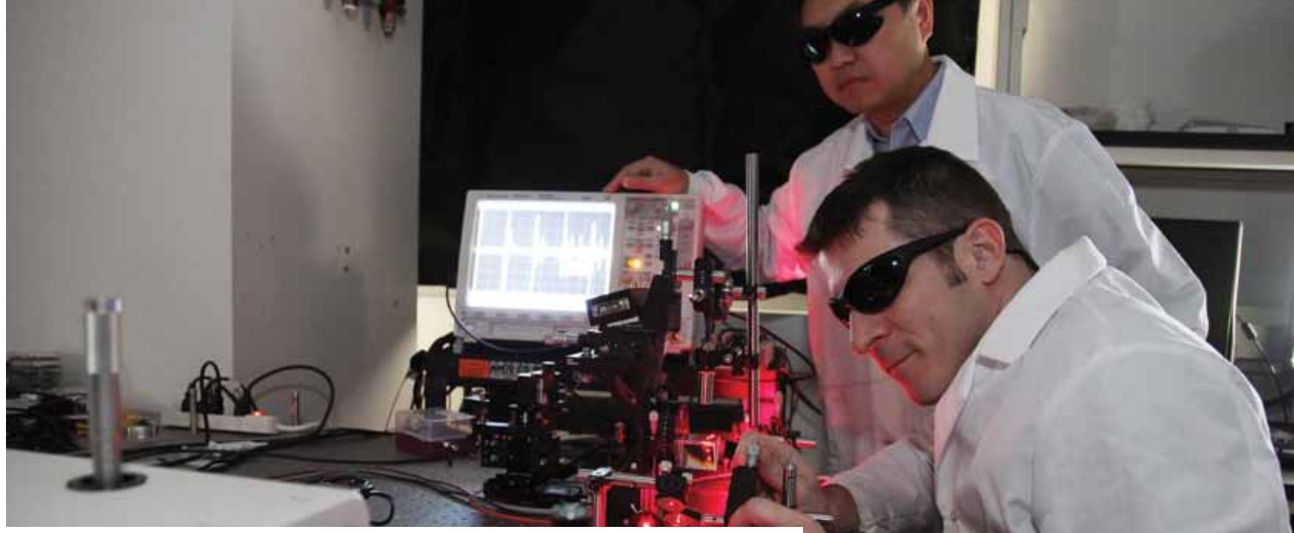
Originally from China, Bing Dong comes to UTSA because it is one of the fastest-growing universities in the nation and Texas. He sees great opportunities here for research collaborations and student education. Dong's expertise lies in Energy Systems, hVAC (Heating, ventilation, air-conditioning), and Controls and Probabilistic Graphical Models. His current work surrounds the development of new strategies, methodologies and systems to improve building energy efficiency, and integrate with renewable energy systems. Prior to coming to UTSA, he was working as a senior research scientist at United Technologies Research Center, where he enjoyed teaching. He always encourages students to discover new knowledge through their own curiosity and leads them to a new and higher area.

Marcio H. Giacomoni

Assistant Professor in Civil Engineering

Ph.D. — Texas A&M University

Marcio Giacomoni, a native of Porto Alegre, Rio Grande do Sul, Brazil, joins the civil engineering department for the opportunity to develop research about water resources in a region where water is a very important resource for economic development and for the environment. He is further motivated by UTSA's mission in becoming a Tier One university. The goal of his research is to develop and apply systems analysis methodologies to support the sustainability of water systems. While typical engineering analysis considers water infrastructure systems in isolation, Giacomoni believes the sustainability of water resources is the results of interactions, adaptations and feedbacks among natural, built, social and economic components. When he isn't finding the connections between water and socio-economic conditions, Giacomoni devotes his time to his wife, Laura, and cheering on his home team Sport Club Internacional, which was the FIFA world champion in 2006.



Become part of UTSA® Engineering

Individuals enrolling in degree programs are given an opportunity to develop a strong background in the engineering disciplines and to learn the analysis, design, and synthesis tools necessary to function well as active participants in both traditional and new and emerging areas of technology.

The College has excellent laboratory facilities where students receive hands-on instruction by faculty. Computer-aided design (CAD) facilities, including state-of-the-art workstations, are routinely used in all programs. Some classes are taught by adjunct faculty from local industries, giving students the opportunity to interact with engineering professionals engaged in relevant engineering practice. With small classrooms, professor interaction, and amazing facilities students receive the best in education.

Degrees Offered

BACHELOR'S

- Biomedical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering

MASTER'S

- Master of Science in Advanced Manufacturing and Enterprise Engineering
- Master of Science Biomedical Engineering
- Master in Civil Engineering
- Master of Science in Civil Engineering
- Master of Science in Computer Engineering
- Master of Science in Electrical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Advanced Materials Engineering

DOCTORAL

- Biomedical Engineering
- Electrical Engineering
- Environmental Engineering
- Mechanical Engineering

Faculty.....92

Undergraduate Students....2,503

Graduate Students.....406

Departments.....4

Degree Programs.....17

$50M

TSERI received a $50 million grant in 2010 from CPS Energy to fund green energy research.

Engineering Trailblazers

by Sherrie Voss Matthews

One example can change the course of a life.

When Dr. Krystel Castillo was a young girl studying in Mexico, her class was visited by a dean from Monterrey Tech in Monterrey, Mexico. A dean of engineering. A female dean of engineering.

That visit offered Castillo the moment when she could see her future: By meeting a trailblazer, a female leader in a science, math and technology-heavy field, Castillo decided early in her life she wanted to become one, too.

"There is a strong correlation between increased female faculty and increased likelihood of female students majoring in the STEM (science, technology, engineering and math) fields," she explains. She was influenced positively by the female dean from Monterrey Tech; that early example revealed the possibilities.

Castillo has since earned two doctorates, one from Monterrey Tech, Campus Monterrey and one from Texas Tech University. She is a specialist in supply chain modeling and optimization, logistics, transportation, process optimization, and quality control and reliability. Throughout her academic career, she has valued international diversity.

"A diverse team is a more creative team," Castillo says. "Diversity can create a climate of miscommunication, but you can develop and create an environment that embraces differences and encourages diverse thinking. The benefits are clear: innovative and high-quality research."

In her first year at UTSA, she has put her beliefs into practice. An international faculty member herself and the first female Hispanic faculty in the Mechanical Engineering Department, she has been recruiting students who are underrepresented in STEM fields for her research team. She seeks out the female engineers, the international students, Hispanics, and other minorities.

"I'm very excited in being able to create a culturally diverse climate, both in my classroom and at my research group at UTSA," she adds. "I'm very proud to be a researcher at a Hispanic-serving institution like UTSA. Several Hispanic students have asked to join my classes because they identify with me."

From her fall class, she invited and added students to her research group focused on supply chain and logistics modeling, quality control and reliability which includes applications in energy, sustainability, transportation, aerospace and manufacturing industry.

Castillo came to Texas to study at Texas Tech, but now she believes it is time that she is the trailblazer, the inspiration, for her students: "I just felt it was time to give back to the community and serve the city of San Antonio."

Well Intentioned Plans

Living within the Sechura desert, one of the most arid places in the world, citizens of Viña Vieja, Peru, struggle for what little water they have. But as farming activity increases, bacterial pollutants now choke the only water supplies available. Until UTSA's Chapter of Engineers Without Borders can finish construction of a well, the citizens are left with few options.

Senior civil engineering student Jessica George learns many lessons from her UTSA professors, but she learned one lesson that none of them could teach her from a nine-year-old girl during the height of the Peruvian summer.

"Leslie probably weighed less than 50 pounds," George recalls of the child who worked tirelessly alongside UTSA engineering students and engineering lecturer John Joseph during the first two weeks of January. Leslie was only one of the dozens of local residents who helped clear rocks and lay pipes along a four-kilometer route to provide clean water to the village of Viña Vieja. Located on the edge of the Sechura desert, south of the Piura Region of Peru, Viña Vieja is one of the most hostile environments on the planet.

"When we thought we were tired, Leslie kept going with an infectious smile on her face," remembers George. "Forget about eye-opening. It was eye-popping. It was like being beamed into a different world."

The students, members of UTSA's Engineers Without Borders (EWB-UTSA) chapter, get more than just the sense of satisfaction that comes with doing what's right. They see the theoretical lessons they learn in class making the difference between life and death.

According to UNICEF and the World Health Organization, Worldwide, 884 million people lack access to clean water. That's almost three times the population of the United States, or one of every eight people on the planet. Every 20

seconds, a child dies from a water-related illness. Each year, 3.5 million people, the equivalent of the entire population of Los Angeles, die from a water-related disease.

After two assessment trips to Peru, the EWB-UTSA team considered various systems of water delivery to the remote village. The three most likely sources of water were rainwater, surface water, and ground/well water.

The team ultimately chose a ground water-sourced system provided by a contracted well. This method of water delivery was chosen for its convenience, water quality, ease of access and moderate cost. For the chosen solution, maintenance and operation of the water system will be localized, and based on the observed skills of the community members, long-term sustainability is likely.

"In terms of the timeline, we are probably about halfway through. In terms of construction we are just getting started, less than 5% complete," Joseph said.

The EWB-UTSA chapter was established in 2007 and has student members from multiple disciplines including mechanical and civil engineering, finance and geology.

"My time with EWB has allowed me to see firsthand the needs of the developing world and as engineers it is our responsibility to serve the global community," says Steven Byers, civil engineering senior.

The well site the team prepared and the pipe it laid to a roadside during its most recent visit will ultimately replace the unreliable—and often tainted—water sources the 500 or so villagers have had to rely on since a series of earthquakes devastated the region in 2007. When it's flowing, villagers can retrieve water from the Matagente River, even though it has been determined to be too high in coliforms for human consumption. When the river is dry, some Viña Vieja residents walk a half-mile, as many as five times a day, to collect water from the wells of an agricultural company that soon will be laced with fertilizer, again considered toxic. Other residents rely on water from a spring that collects into a communal pool. The same communal pool is used for animals to drink from, trash to fall into, children to play in, and waste water to fill.

UTSA-EWB faculty advisor and civil and environmental engineering assistant professor Dr. Heather Shipley, an expert in water quality monitoring; water purification including the use of novel technologies such as nanomaterials; fate and transport of nanoparticles; water sustainability; and technology comparisons and improvements for water and wastewater treatment, says students learn a variety of lessons through their involvement in EWB-UTSA.

"They learn both technical and professional skills," she explained. "The engineering students use what they are learning in classes to design the water system. This includes delivery of water, infrastructure, and project management."

This is the third trip EWB-UTSA has made to Peru as part of a five-year agreement with the town of Viña Vieja in cooperation with local non-governmental organization Texas Partners of the Americas. While TPA has rebuilt a school, a library and a dining hall; clean, reliable water is a top priority if the village is to survive.

The solution designed by EWB-UTSA students consists of one submersible and two booster pumps and five 10,000-liter water tanks. Three tanks will be near the source water well and the other two tanks will be uphill from Vina Vieja. The project also includes more than six kilometers of PVC pipe at various diameters, and individual taps available at almost every home.

"I noticed the community members enjoyed a lot in life even though they didn't have the basics to sustain it," explained EWB-UTSA president and mechanical engineering senior Dustin Vasquez of his experience.

EWB-UTSA is planning another trip in August to make the water system operational. Equally important to the success of their mission is the education of the community.

Team members are teaching the citizens about proper hygiene, water safety and how to effectively care for the water system once it is complete. They have established a water committee made up of community volunteers and leaders to ensure proper care of the equipment and to assess small fees to cover the cost of sustainability.

"I'm impressed that these students took time from their holiday break to endure harsh living conditions, so such a basic need of the people of Vina Vieja might be met, and how diligently and steadily they worked as unexpected obstacles arose." Joseph said. "Students who join EWB already know that there's more to life than making money. I think that those investing their time in this project are developing a habit of caring about others, and come to know deeply that there's real people in this world beyond our own borders."

"...as engineers it is our responsibility to serve the global community."

Paying for these trips is another opportunity for UTSA students to learn. "They need to raise money for their travel and to carry out the project. As a result, they learn professional skills like fundraising and budgeting," Shipley said.

EWB-UTSA is currently engaged in fundraising projects to finance its next trip. They hope to raise between $15,000 and $25,000 to cover the costs associated with flying students to Peru to build a life-saving water supply. Current donors to the group include Clearly Zimmermann Engineers, GKW-Inc., Gabriele and Mark Niederauer, UTSA Family Association and Parent Council, UTSA College of Engineering, UTSA College of Engineering Office of the Dean, the UTSA Department of Civil and Environmental Engineering, Alamo Toyota, Wayne S. Alexander, BruteSquad, LLC, Coursen-Koehler, LLC, Tony Diamond, Stephen T. Graham, John F. Joseph, and Red McCombs Automotive Center.

An Unlikely Life

If at first you don't succeed...

by Randy Lankford

If Michou Kelley's life seems remarkable, consider that it was never expected to happen at all.

Marie-Michelle "Michou" Kelley was born in New York City after her mother had left Haiti to provide a better life for her family. "My mother started having babies immediately after getting married. She had five in five years. Then she had seven miscarriages. I was never expected to happen. I was definitely an unexpected miracle. I'm 12 years younger than my nearest sibling."

Now, on the brink of receiving her Ph.D. in biomedical engineering, Kelley, 49, is looking forward to the next phase of an unlikely life.

During a childhood in which she was routinely physically and emotionally abused, Kelley found an escape in school and dreams of an engineering career. "I was the classic engineering kid," she explains. "I was forever taking things apart, and all I ever talked about was being an engineer and building things."

That engineering career seemed attainable, even probable, when Kelley graduated from high school a year early at only 16. College ambitions were derailed however by the death of her godmother and mentor, Dounia or as she affectionately calls her Ninninn.

"She was my oasis in the desert," recalls Kelley. "I was born at a time when there weren't a lot of female engineers. And my mother came from a culture where women just didn't become engineers. Dounia was my role model. She wanted to be an engineer when she was a girl and never had the opportunity. But she understood what I longed for. She encouraged me to find my passion and follow it. I was lost when she died of breast cancer."

By 19, Kelley was married and had become a mother. For the next four years Kelley went to school off and on for engineering. In 1987 her life was run off track again when her husband abandoned her and their children. Rather than remain in engineering, Kelley knew she had to provide for herself and her children, so she went to San Antonio Community College to become an electronic technician, the closest thing to an electrical engineer she could be. After a few years of hard work, she tried to pick up where she left off with engineering and went back to UTSA in 1997. However, life had more curve balls in store for her, and she was forced to face the unexpected loss of her mother who also died of breast cancer. Once again, it seemed as though her dreams had been put on hold—but never stopped.

Though delayed more than 25 years, Kelley's dream of a college education couldn't be denied. She had overcome the loss of her mother and godmother, abandonment of her ex-husband, and struggled with being a single parent. Through it all she knew her dreams might be deferred but always attainable. After returning to UTSA in 2003, she persevered and received her bachelor's degree in electrical engineering in 2006.

Immediately after graduation, she began pursuing her doctoral degree. Kelley's focus shifted from electrical to biomedical engineering, as she sought to advance medical research. Then she went to Haiti and everything changed. Again.

"My sister and I went to Haiti as translators for a group of medical students working in a very remote area in 2008. This was before the earthquake in 2010, but even then, there was a desperate need for even the most basic medical necessities, things we take completely for granted."

The change this time wasn't a delay of study, or anything that could be visibly recognizable. Instead, the change was more of a spiritual awakening.

"When you're younger you're sort of chasing the career, trying to break through the glass ceiling and provide for your family. After my trip to Haiti, I began looking for fulfillment. I want to have an impact and change the world."

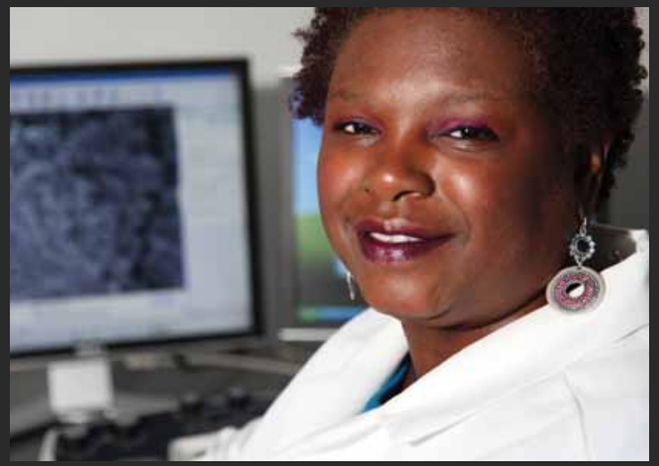
Inspired by her tragic losses, Kelley's doctoral research platform centered on metastatic breast cancer. Her Ph.D. dissertation addresses "Logical Enzyme-Triggered Layer-by-Layer Nanocapsules for Drug Delivery System." In essence, she's working on a way to increase the efficiency of chemotherapy treatment for cancer patients while minimizing its side effects.

"The normal way of administering chemotherapy is systemic," Kelley explains. "It goes all over the body. Today, only .01 percent of the drug being administered gets to where it needs to go. So the technology I'm working on will make these nanoparticles recognize cancer cells and release the drug only to them. That will improve the efficacy of treatment and lessen the side effects of having the chemo drugs throughout the body when they only need to be delivered to certain cells."

While her research may well have a global impact, Kelley believes she's already made a mark on a smaller scale.

"My grandchildren have come to the lab with me, the same way my sons did. My grandchildren probably don't realize it now, but someday, when they're facing a challenge, they may look back and think, 'Wait a minute, my Nana did what? If she can do that, I can do this.'

"I broke that cycle of abuse my mother and I experienced. My sons are loving fathers and their children see a lifetime of potential. I've already changed the world."



Fascinated With Failure

UTSA Engineer Looking For Faults

by Randy Lankford

Everyone has failed at something at one time or another. Experiencing the failures of others has become a form of Internet entertainment. And avoiding failure is considered the smart thing to do. But, there's smart and then there's SMART. Juan Ocampo is the embodiment of one and the creator of the other.

Instead of avoiding failure, Ocampo looks for it every day. A Medellin, Colombia native, who will receive his mechanical engineering Ph.D. this summer, Ocampo is determined to cause as many failures as he can.

And, in so doing, save lives.

During both his master's and Ph.D. studies at UTSA Ocampo has been one of the main developers of Small Aircraft Risk Technology (SMART), a computer code created for the Federal Aviation Administration (FAA), that uses flight data such as load, velocity and flight durations of small aircraft to analyze their configurations and determine their probability of failure. Through his work in probabilistic damage tolerance analysis for small airplanes, calculating the stresses a particular small aircraft design can endure over time, Ocampo can predict when a component is likely to fail. Based on that information, inspection and maintenance schedules can be developed to ensure the safety of the world's aging general aviation fleet. There are approximately 150,000 such aircraft in the United States and more than 240,000 worldwide with an average age of 40 years.

That's smart, but Ocampo also admits, he's worked hard and been lucky.

The son of a businessman and a school teacher, Ocampo has always appreciated the value of education and knew he'd have to apply himself to accomplish his dream of becoming an engineer. "I've been fascinated with airplanes and flight since I was a child growing up in Colombia. My family moved to San Antonio after I earned my bachelor's degree there. That's when I learned about UTSA and got the opportunity to work with Dr. (Harry) Millwater."

Millwater's 20 years of experience in the application of probabilistic mechanics methods to aerospace components, aircraft structures and gas turbine engine disks were a perfect match for Ocampo's curiosity. And as department chair, he's been able to provide his student with numerous research and collaboration opportunities. The partnership between the two has been a successful one.

In 2009 Ocampo was awarded "Best Paper" at the AIAA Region IV Student Conference and was recognized by the FAA for outstanding achievement in aviation in 2011. He partnered with the Canadian National Research Council on the implementation and validation of a method for computing stress intensity factors and beta factor of collinear interacting cracks in 2011 and again in 2012 in probabilistic risk assessment methodology and application to aerospace structures. He has had two journal publications, 10 peer-reviewed paper presentations and three non-peer-reviewed presentations.

After graduation Ocampo will remain at UTSA as a research professor working on the probabilistic fatigue management program for general aviation.

"My goal," says Ocampo, "is to contribute to the aviation field either with an aircraft manufacturer or a research institution."

Smart. Very SMART.

FASTER.
SMARTER.
STRONGER.

Paul Martinez, the new face of the American Society of Civil Engineers (ASCE), is shattering the mold of what it means to be an engineer.

It's not unusual for people to think engineers spend all their time solving complicated equations, reading obscure books on thermodynamics, or playing video games. You know, they're nerds. But be careful with assumptions like that around Paul Martinez, unless you want a roundhouse kick to the face.

Actually Martinez, an engineering student who practices mixed martial arts (MMA), is pretty laid back and hardly ever kicks anyone in the face. He's soft-spoken, always willing to help out, and generally easygoing. He just happens to be equally capable of putting an opponent in an arm bar as he is of solving an integral.

Born and raised in Houston, Martinez was a scholarship student at Strake Jesuit College Preparatory School. That's where he developed the solid foundation of learning he's now building on as an engineer. Martinez isn't just about the classroom though. He wrestled, played football, and threw discus. If that wasn't enough to keep him busy, he also played rugby with the Houston Area Rugby Club college team, and was selected to play with The United States U-17 Eagles, a national rugby team.

After high school, Martinez set his sights on college. Originally interested in developing algae-based biofuels to improve overall green technology, Martinez quickly realized he was looking for a more hands-on experience.

"Although environmental science is a fundamental part in the movement toward a more sustainable world, the impact on the modern world I was looking for could only be achieved through engineering," Martinez explained. "As an engineer, I felt like I could use all the science I have been learning up to now and apply it to a current, real-life problem."

Martinez, a member of the first generation in his family to go to college, is in his third year in the UTSA civil engineering program. He was recently named one of the 2013 New Faces of Civil Engineering-College Edition by the American Society of Civil Engineers (ASCE) and is one of only 10 college students across the nation to receive this recognition.

He was selected from a field of talented college students nationwide whose academic and extracurricular achievements demonstrate their promise as future engineers and leaders in their profession.

"To be recognized by ASCE as a future leader in engineering is an honor almost beyond belief for me," said Martinez. "I credit my hard work ethic to my parents. Engineering, just like sports, requires perseverance and a never-give-up mentality."

Becoming the face of ASCE is no easy feat. To achieve that level of recognition in engineering requires both dedication and determination, things Martinez takes with him every time he goes to the mat against an opponent. For Martinez, engineering and MMA are two sides of the same coin. They require similar characteristics in order to succeed and where one hones the mind, the other hones the body.

"For me, MMA and engineering are similar because they take the same gritty determination to win, but are just applied differently. Both require thinking, but thinking when you are completely exhausted is a little different than thinking when your grades are at stake. The mentality of being cool, calm and collected when in the most intense of fights has allowed me to develop into a student who does not panic when put under stress. Instead, I react by analyzing the situation and coming up with a plan to win," Martinez said.

As he began studying engineering at UTSA, he felt something was missing. Martinez had been physically active in high school and now much of his life was spent learning complex equations. He needed an outlet, something to push his competitive instincts. It seemed only natural for him to turn to MMA.

"I had to channel that need for competition to prove to myself I was still capable of winning, and I found a home in mixed martial arts. I really liked the aspect of the 'one on one' competition. A fight is just a test of wills at some point, and whoever can establish their dominance on the mat is the victor," Martinez said.

Whether he is succeeding in class or on the mat, Martinez has the will to keep going. So the next time you think an engineer is just a nerd fixing the problems of the world, remember that Martinez is out there, looking for his next challenger.

"Although environmental science is a fundamental part in the movement toward a more sustainable world, the impact on the modern world I was looking for could only be achieved through engineering."

"A fight is just a test of wills at some point, and whoever can establish their dominance on the mat is the victor."

ENGINEERING BRILLIANCE

Thousands of Reasons

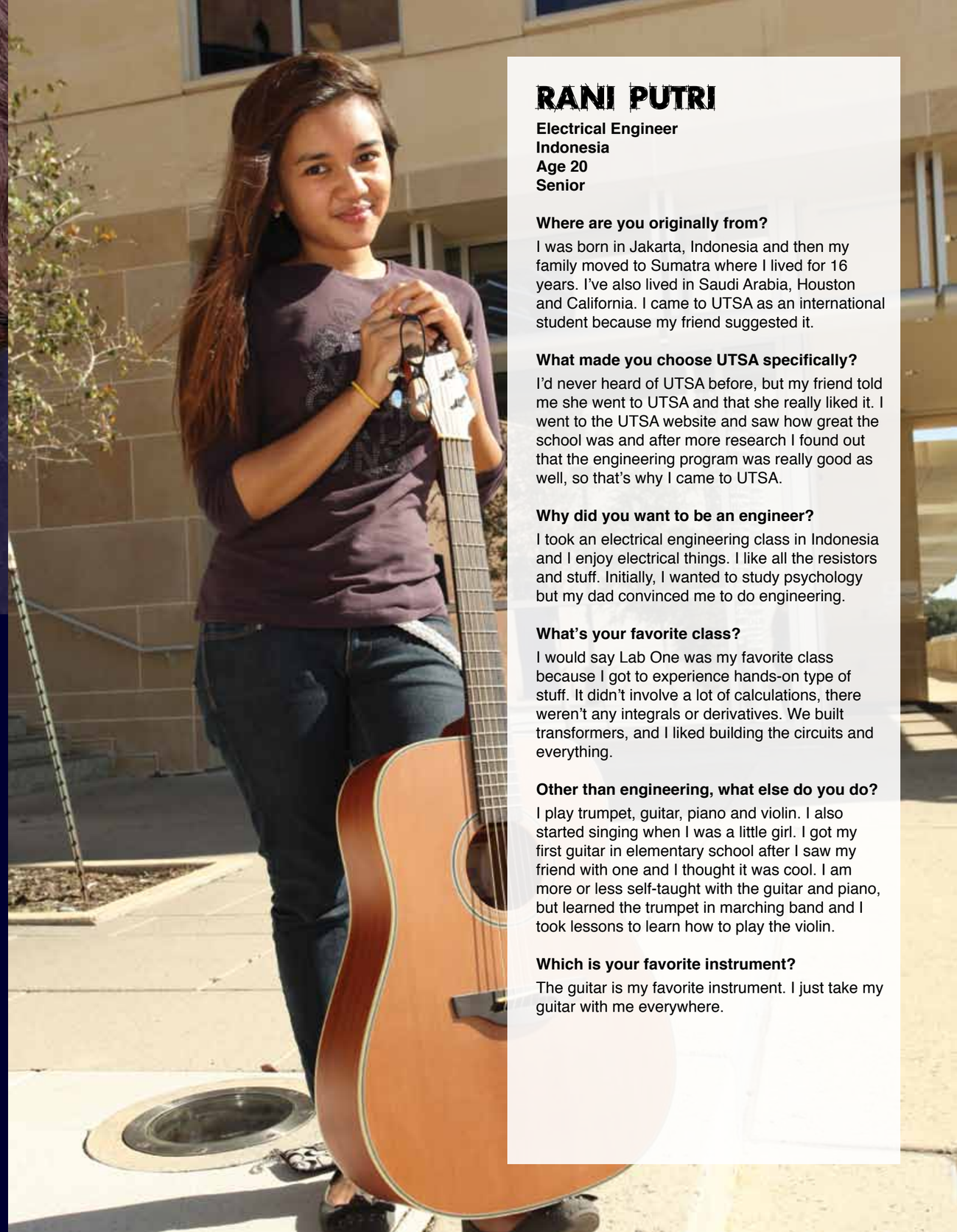
With more than 2,000 undergraduate and 400 graduate students in 17 degree programs, the College of Engineering is a driving force behind The University of Texas at San Antonio becoming a Tier One Institution. We are consistently voted one of the top colleges for Hispanic students. With small classrooms, professor interaction, and state-of-the-art facilities, students receive the best in education.

To help students take full advantage of everything offered in the College of Engineering, our goal is to provide scholarships and fellowships. If you need a reason to give, we've got thousands of them. To give to the College of Engineering, please visit https://giving.utsa.edu.

"I am confident that our rapidly growing and exciting programs will provide some of the future scientific breakthroughs that will keep our nation at the forefront of technology."

C. MAULI AGRAWAL, Ph.D.
Dean, College of Engineering

UTSA Engineering



RANI PUTRI

Electrical Engineer
Indonesia
Age 20
Senior

Where are you originally from?

I was born in Jakarta, Indonesia and then my family moved to Sumatra where I lived for 16 years. I've also lived in Saudi Arabia, Houston and California. I came to UTSA as an international student because my friend suggested it.

What made you choose UTSA specifically?

I'd never heard of UTSA before, but my friend told me she went to UTSA and that she really liked it. I went to the UTSA website and saw how great the school was and after more research I found out that the engineering program was really good as well, so that's why I came to UTSA.

Why did you want to be an engineer?

I took an electrical engineering class in Indonesia and I enjoy electrical things. I like all the resistors and stuff. Initially, I wanted to study psychology but my dad convinced me to do engineering.

What's your favorite class?

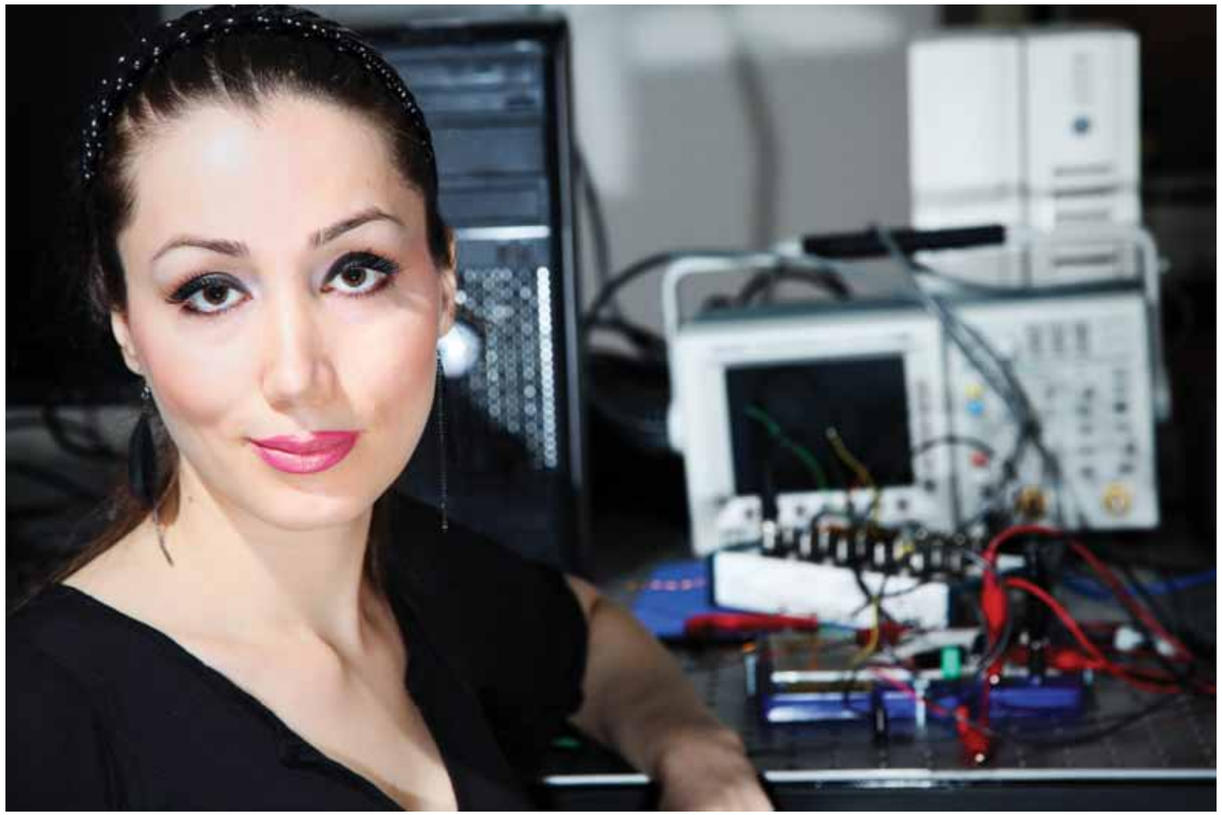
I would say Lab One was my favorite class because I got to experience hands-on type of stuff. It didn't involve a lot of calculations, there weren't any integrals or derivatives. We built transformers, and I liked building the circuits and everything.

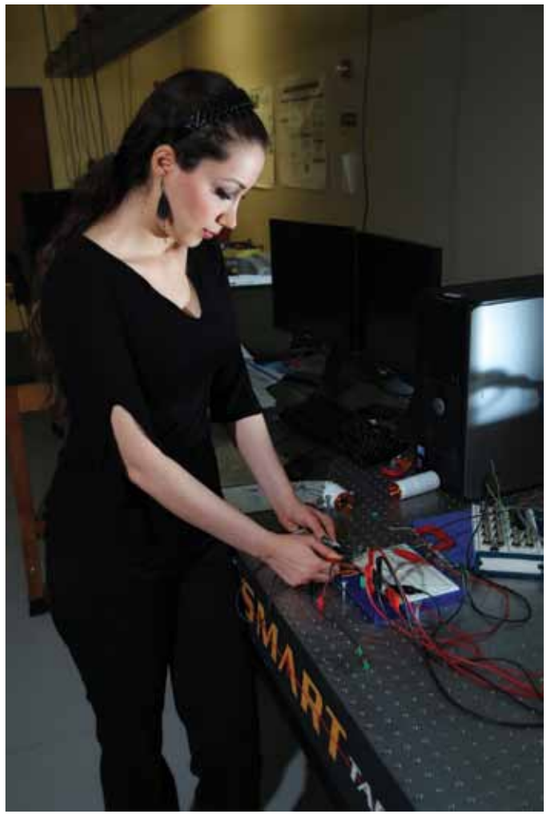
Other than engineering, what else do you do?

I play trumpet, guitar, piano and violin. I also started singing when I was a little girl. I got my first guitar in elementary school after I saw my friend with one and I thought it was cool. I am more or less self-taught with the guitar and piano, but learned the trumpet in marching band and I took lessons to learn how to play the violin.

Which is your favorite instrument?

The guitar is my favorite instrument. I just take my guitar with me everywhere.





LONG-DISTANCE COMMUNICATION

Traveling across the world to fulfill her dreams, Iranian student Maryam Niknamfar studies fiber optic technology at UTSA.

The worst part of any day is often the commute to and from work. You're stuck in traffic, at the mercy of accidents, weather, and all the other drivers who clearly have no obligation to follow the rules of the road. But for Maryam Niknamfar, an international student from Iran, her commute for three years was even more intense. She flew 500 miles to work each week just so she could teach at one of the Iranian universities in Shushtar.

Being a teacher is one of only a handful of career choices available to women in Iran in which they can earn a decent salary and be a highly respected member of the community. Although she loved teaching, and might do it again one day, Niknamfar wanted more—she wanted to pursue engineering.

Before coming to UTSA, Niknamfar earned her master's degree from the Science and Research University, in Tehran, Iran, and set her sights on advancing her career with a degree from an American university.

"I was travelling long distances to improve my resume in order to apply for universities in the U.S. I spent hours searching for a good advisor in electrical engineering with a specific area of interest in telecommunication. After taking the TOEFL and GRE exams, I applied to UTSA and have been here since the fall of 2010," Niknamfar said.

For Niknamfar, it was important to advance her career and continue studying engineering. As with most engineers, she has been fascinated by mathematics and physics from an early age. Her mother, who is also her best friend, encouraged her to pursue these interests and guided her through all levels of education. As she progressed in her studies, Niknamfar combined her interests with telecommunication and, through her research in fiber optics, has been working on methods to improve the way we communicate. Her current coursework involves improving radio over fiber optics (ROF) for better signal quality.

"ROF is a combination of telecommunication techniques, which are mainly mathematics-based, and optical fiber techniques, which are mainly physics-based," Niknamfar explained. "ROF is relatively new method which can support an increasing demand for wireless data transmission devices. My research is focused on enhancing ROF techniques and making them more efficient. Optical fiber could handle a huge data rate for transmission over long distances if it's nonlinearity and distortion could be controlled. I am looking for novel methods which could control these impairments."

Improving communication techniques strikes close to home for Niknamfar because she is on a single-entry visa. Because she can't visit Iran or leave the U.S. before she completes her research Niknamfar must rely on current technologies to connect with friends and family back home.

"It is hard for me to be so far from my parents, I am always worried about their feelings and health. My mother is my close friend, and before I came here I could talk to her every day. Now I don't have the same chance. We could use Skype to talk, but this is too hard for us since we aren't able to hug each other and really connect. This is the situation I have to tolerate in order to pursue my education in a high-quality university and live in a society which is supportive to women," Niknamfar said.

Niknamfar isn't making these sacrifices just for herself. She also wants to change the culture she grew up in and inspire other women to pursue their dreams. Although Iran encourages women to seek higher education— according to Niknamfar, more than 50 percent of university students in Iran are female—the opportunities for women after graduation aren't as lucrative as they are for men. Women must still wear traditional hijabs at work, it is more difficult for them to find a good job, and marriage laws heavily favor the men.

"I am determined to continue my education at UTSA for a better future for myself and the people I could support; women like me who want a prosperous future, but have to look for it in a more modern country," Niknamfar said. "Most of the women in Iran are well educated, and have made notable contributions to Iran's scientific environment. But, their chances of finding a good job are less than that of men."

Although she doesn't have to travel 500 miles to work each week, Niknamfar must overcome other hurdles many of us never face. She must learn a language different from her own, adjust to new cultural and social norms, and maintain her 4.0 G.P.A. Compared to those challenges, a 30-minute commute to work doesn't seem so bad anymore.

Bridging The Gaps

by Sherrie Voss Matthews

Dr. Arturo Montoya's research may be about suspension bridges and the material components within, but he also has begun constructing bridges between himself and his students, and creating a bridge in research with colleagues within the College of Engineering.

Montoya, who grew up in Tegucigalpa, Honduras, does not truly think of himself as an international scholar; he's spent the last 11 years in the United States, studying in both upstate New York at St. Lawrence University, close to the Canadian border, and in New York City, at Columbia University.

He's found in the UTSA College of Engineering a place that is collaborative and welcoming to a new researcher and assistant professor. He has discovered that his research crosses over with work in the department of mechanical engineering and Dr. Harry Millwater's mechanical engineering studies.

"It's the same research methodology applied to different structures," Montoya explains. "Both bridges and aircrafts experience a large number of stress cycles over their lifetimes."

Montoya expected to be focused on his research while at UTSA, but he's found an unexpected love for teaching and the students. He thinks the students might appreciate him being a freshly minted Ph.D. Not so very long ago, he was sitting in the lecture, not up front teaching it.

"I guess I identify with the international students," he says. "They come and ask me questions about Ph.D. applications; I'm glad to help them."

He began his bachelor's degree at St. Lawrence University on scholarship, and then completed his engineering coursework at Columbia University in New York City, where he earned a scholarship to do his master's and doctoral work.

Montoya wanted to focus on research after earning his doctorate. When his advisor at Columbia saw an email about an opening at UTSA, Montoya decided to give it a try.

"It was just perfect; San Antonio, that is a vibe very similar to home," he says. "UTSA is trying to establish connections with Honduran universities. The signs were all there."

His ability to connect with students extends beyond the international population.

"I try to teach skills that they can take out of class, I try to apply real-world problems to the theory," he explains. "My teaching can be very theoretical, so I try to do big picture, then details, then where we will end up.

"I love the one-on-one interaction that you get with the students, especially during office hours," he says. "You get to see if they really get it."

The American Dream

She wasn't wealthy growing up, and she didn't go to the best schools. But Tania Hernandez had the one thing that practically guaranteed her success—a family that would do whatever it took to make sure she could go to college.

For some the “American Dream” is more than just an idea or vague concept talked about during election years. To them it is an attainable goal. The “American Dream” is the promise of a better life and upward social mobility through hard work, education and perseverance. It is something that might be out of reach for one generation, but can be handed down to the children of the next. It was this dream Tania Hernandez’s mother gave to her.

Hernandez came from a proud working-class family on the south side of San Antonio. Her parents, both immigrants from an extremely poor region of Mexico, became U.S. citizens in the hopes of giving their children something more. After her parents’ divorce, her mother worked cleaning houses to support Hernandez and her three siblings.

“Growing up I thought I had everything. I had cousins to play with, family was nearby, I wasn’t really worried about anything,” Hernandez said. “It wasn’t until later that my mom told me for a little while we were living off of about $50 a week plus money she had saved. She took on so much, so that I never had to worry.”

Free from fears and concerns at home, Hernandez excelled in school. She participated in sports, student council and other organizations. For her, doing poorly in school simply wasn’t an option.

“I am the first one in my family to go to a university. I had a great support system. My older siblings, my parents, everyone really, pushed me to do good in school,” Hernandez explains.

As she moved closer to graduation, Hernandez set her sights on being a business owner. She wasn’t quite sure what business she wanted to run, but she knew she wanted to be the boss. Her teachers, however, had other plans. They encouraged Hernandez to set her goals on something higher, on something a little more concrete.

“My teachers challenged me to become an engineer. They were also pushing two other guys in my calculus class to do the same. These were the guys I competed with in high school, and I wanted to show them that I could do anything they could do. I had always heard good things about engineers, and I knew they made lots of money, so I said, ‘I can do that.’”

With a goal in mind and her sights set, Hernandez finished high school and went on to study engineering at UT-Dallas. But her time there was short-lived. The college life wasn’t what she expected. She missed her family, and the school didn’t give her a sense of belonging. After her freshman year in Dallas, Hernandez moved back to San Antonio and enrolled at UTSA. Her plan was to continue her mechanical engineering degree at UTSA until she was accepted at UT-Austin. What she never expected was falling in love with her new school.

“I always thought of UTSA as a commuter school. I don’t know why I thought that; I never visited the campus or anything. But when I came here for the first time, I was shocked,” Hernandez recalled. “The campus was huge. After being here for a while, I didn’t want to go to Austin. I saw first-hand how great the education is here. I love it.”

The road toward engineering hasn’t been an easy one, however. Where schoolwork used to come as easy as breathing, Hernandez now had to work at getting good grades. She quickly learned a valuable life lesson—not all education in San Antonio is created equal.

“I thought I had a good education,” she said, “until I got to the university level. I went to inner-city schools growing up, and I now realize kids around other parts of San Antonio are being educated at a much higher level. Here, I’m working to keep up rather than always being at the top of my class.”

With strong support from her family and a desire to learn, Hernandez does more than just keep up. She is currently a mechanical engineering student, the president of the Society of Women Engineers, a fundraising coordinator for Destino (A faith-based Latino support group), has worked at four internships with CPS Energy, and is a role model for young women throughout San Antonio.

“I’m happy I chose to become an engineer. Engineers work with so many different things from managing people to designing things to working with machines—engineers can do it all,” said Hernandez. “Most importantly though, I want to become an engineer so I can help my mom. She’s done so much for me, and I would like to be able to give her as much as she’s given me.”

GAME CHANGER LECTURE SERIES

LESSONS IN LEADERSHIP

Ed Whitacre, former chairman and CEO of General Motors and chairman emeritus of AT&T Inc., presented the keynote address of the inaugural UTSA College of Engineering Game Changer lecture.

Whitacre's lecture, "Lessons in Leadership" touched on his rise to prominence and how, as an engineer, he successfully navigated the business world.

Much of his talk focused on having a vision and acting upon it. He attributed his success, not to never failing, but to making a plan and sticking with it. He also addressed the need to simplify operations and empower employees to make decisions. Throughout it all, He further emphasized the importance of treating people with respect.

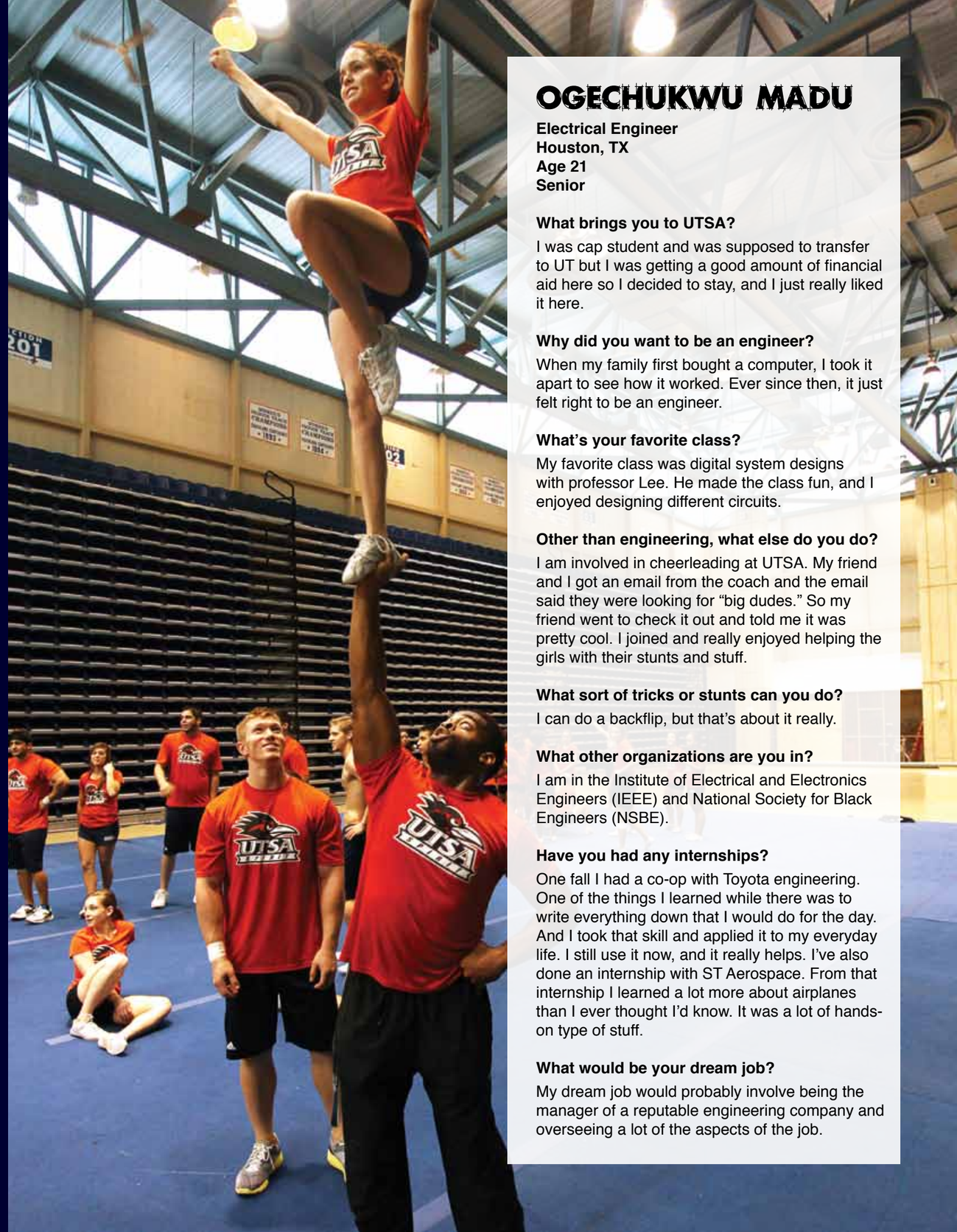
The highlight of the lecture came during the question and answer session. Members of the audience were able to ask him about specific experiences in his life or his thoughts on weighty subjects like needing more female CEOs.

At the conclusion of the lecture, Whitacre graciously signed copies of his book and spoke one-on-one with individual attendees, many of whom also had their photo taken with him. Whitacre's "Lessons in Leadership" and amiable nature set the bar high for incoming speakers.

Whitacre was also thanked for his contribution to the College of Engineering and given a real chair to symbolize his donation of $500,000 for The Edward E. Whitacre, Jr. Endowed Chair in Mechanics. The Edward E. Whitacre Chair in Mechanics offers students the opportunity to prepare for careers in traditional, new and emerging technologies in the field of Mechanical Engineering. The endowment will support a leader who will continue to advance knowledge, communication and leadership skills for the benefit of future engineers. The endowment was created by the Whitacre Family Foundation.

The new lecture series is designed to present highly successful engineers and community leaders sharing their knowledge and experiences with students and others in the university and engineering communities.

"Each lecture in this series is meant to inspire students and give them a role model they can use as a guidepost for their own career paths," said Mauli Agrawal, dean of the UTSA College of Engineering. "Mr. Whitacre is known for his diligence, attention to detail and decisive management style, and we are very excited that our students will be able to witness what makes a great leader tick."



OGECHUKWU MADU

Electrical Engineer
Houston, TX
Age 21
Senior

What brings you to UTSA?

I was cap student and was supposed to transfer to UT but I was getting a good amount of financial aid here so I decided to stay, and I just really liked it here.

Why did you want to be an engineer?

When my family first bought a computer, I took it apart to see how it worked. Ever since then, it just felt right to be an engineer.

What's your favorite class?

My favorite class was digital system designs with professor Lee. He made the class fun, and I enjoyed designing different circuits.

Other than engineering, what else do you do?

I am involved in cheerleading at UTSA. My friend and I got an email from the coach and the email said they were looking for "big dudes." So my friend went to check it out and told me it was pretty cool. I joined and really enjoyed helping the girls with their stunts and stuff.

What sort of tricks or stunts can you do?

I can do a backflip, but that's about it really.

What other organizations are you in?

I am in the Institute of Electrical and Electronics Engineers (IEEE) and National Society for Black Engineers (NSBE).

Have you had any internships?

One fall I had a co-op with Toyota engineering. One of the things I learned while there was to write everything down that I would do for the day. And I took that skill and applied it to my everyday life. I still use it now, and it really helps. I've also done an internship with ST Aerospace. From that internship I learned a lot more about airplanes than I ever thought I'd know. It was a lot of hands-on type of stuff.

What would be your dream job?

My dream job would probably involve being the manager of a reputable engineering company and overseeing a lot of the aspects of the job.

The Gift of Engineering

Dr. Norman Jacobson is no novice when it comes to entrepreneurship or philanthropy. He is a past CEO of the Healthcare and Information Management Society (HIMS), a US not-for-profit organization dedicated to promoting a better understanding of health care information and management systems, and he is also the founder of Humana's hospitalist program in San Antonio. Currently, Jacobson is a real estate partner and investor with fellow philanthropist Jim Bodenstendt.

Along with Bodenstedt, Gene Dawson, and Buddy Swift, Jacobson serves as a Director of the Roadrunner Foundation, which supports UTSA Athletics. Through the foundation, Jacobson has donated more than $128,000. And in December of 2012, he personally pledged another $250,000, which was matched by HEB to total $500,000, to establish the Jacobson Distinguished Professorship of Innovation and Entrepreneurship for the College of Engineering.

The Jacobson Distinguished Professorship of Innovation and Entrepreneurship is expected to change the face of entrepreneurship in our region. The endowment will not only bring a leader to UTSA who will expertly guide young entrepreneurs, but it will also provide financial resources that can be used to encourage students' success in their technology entrepreneurial endeavors, making San Antonio a hub for new business activity.

"It was important to donate to UTSA Engineering because I wanted to honor the leadership of my associate, Jim Bodenstedt. I also wanted to return to the community that has been so kind to me, and I particularly, wanted to highlight the important, innovative, and productive performance of the College of Engineering spearheaded by Dr. Agrawal," Jacobson said.

Jacobson sees his donation as vital in helping UTSA reach Tier One status. He believes contributions like his can help attract the resources necessary to bring in top-notch faculty and students. And these newfound resources carry enormous spin-off opportunities for the University and the city.

"It's a tedious and incremental process to achieve credibility and acclaim, but the effort is worthwhile and the rewards, at all levels, are good for the university and the city," Jacobson explained.

Although he isn't a UTSA Engineering graduate, Jacobson sees value in the work being done here. He's visited with the students and faculty on several occasions and knows the caliber of research taking place.

"Its dynamic growth and commitment to teaching and practical application of learning and invention impresses me the most about the college," Jacobson adds. "My interaction with the students has awed and inspired me, and raised my enthusiasm for supporting the college."

Dean's List Fall 2012

The Dean and faculty of the College of Engineering congratulate the following undergraduates for making the Dean's List. To attain this honor, these students achieved a 3.75 or higher grade point average while registered for the fall semester of 2012.

BIOMEDICAL ENGINEERING

Cruz, Adrian	FR	Cleaver, Andre	FR
Gilmore, John	SO	Rodriguez, Rebekah	JR
Villarreal Berain, Analaura	JR		

CIVIL ENGINEERING

Hayes, Timothy	SR	Cunningham, Kolin	SR
Alfaro, Karem	SR	Reed, Taylor	SR
Gomez-Farias, Armando	SR	Osifuwa, Feyisayo	SO
Brunette, Nathaniel	SR	Poell, Jacob	SO
Lougue, Alimata	JR	Watson, Amanda	SR
Bazar, Adam	SR	Andrade, Paolo	JR
Patrick, Robert	SR	Espinoza, Alberto	SR

COMPUTER ENGINEERING

Quirem, Saddam	SR	Priatmadi, Anggi	JR
Morales, Kathlene	SR	Garcia, Ruben	SO
Davila, Barbara	SR	Davis, Cory	SO

ELECTRICAL ENGINEERING

Cruz, Jose Luis	SR	Castro, Marc	SR
Spikes, Clarence	SR	Castillo, Edward	JR
Cochran, William	SR	Siller, Edgar	JR
Jonguitud, Oscar	SR	Vernor, Dusten	SR
Ricks, Tanner	SR	Kajonpong, Punsak	SR
Zamora, Rene	SR	Ortiz, Jacqueline	SR
Gomez, Fabio	SR	Failakawi, Yousef	JR
Cruz-Lambert, Josue	SR	Osmer, Aaron	JR
Green, Hector	SR	Harper, Taylor	SR
Sanchez, Steve	SR	Sasa, Solomon	SO
Armstrong, Brian	SR	Alhussaini, Abdulaziz	SO
Hower, Bryce	SR	Kocian, Garrett	SR
Davis, Jamal	JR	Mcgee, Ross	SR

MECHANICAL ENGINEERING

Morales, Jesus	SR	Parks, Kathryn	SO
Dennis, William	SR	Husain, Ali	JR
Silvester, Conrad	SR	DeLeon, Emmanuel	SO
Chapman, Chase	SR	Gomez, Miguel	SO
Hughes, David	SR	Mosely, Levi	JR
Medina, Arlo	SR	Algoblan, Abdullah	SO
Mojica, Pedro	SR	Mendez, Carlos	JR
Badshah, Huzeifa	SR		

PRE-ENGINEERING

Grams, Travis	SO	Turasz, Michael	SO
Gruenberg, Kyle	JR	Guevara, Ricardo	SR
Cuellar, Emilio	SR	Borges, Carlo	FR
Garcia, Jesus	SO	Ingraham, Phillip	SR
Almokhaitah, Mohana	SO	Belk, Mason	FR
Marcantel, Grace	SO	Amini, Pegah	SR
		Mannion, Dylan	JR

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What's New In Your Life?

We want to hear about our alumni. Keep us informed on what's been happening in your life. Perhaps a new job, exciting travel, or new projects. We would love to share the news with your classmates and give current students a glimpse into the life of a College of Engineering graduate. Send your stories and photos to Tim.Luukkonen@utsa.edu.

Ronald Rhea and David Finnie, class of 1984, pose next to their original class photo during the UTSA Engineering Program's 30th anniversary dinner.