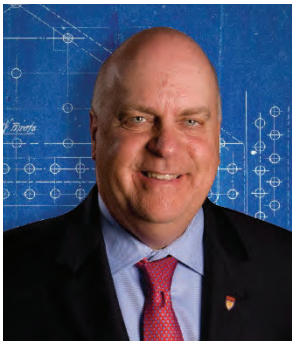
The Cougar Engineer

summer 2011 volume 6

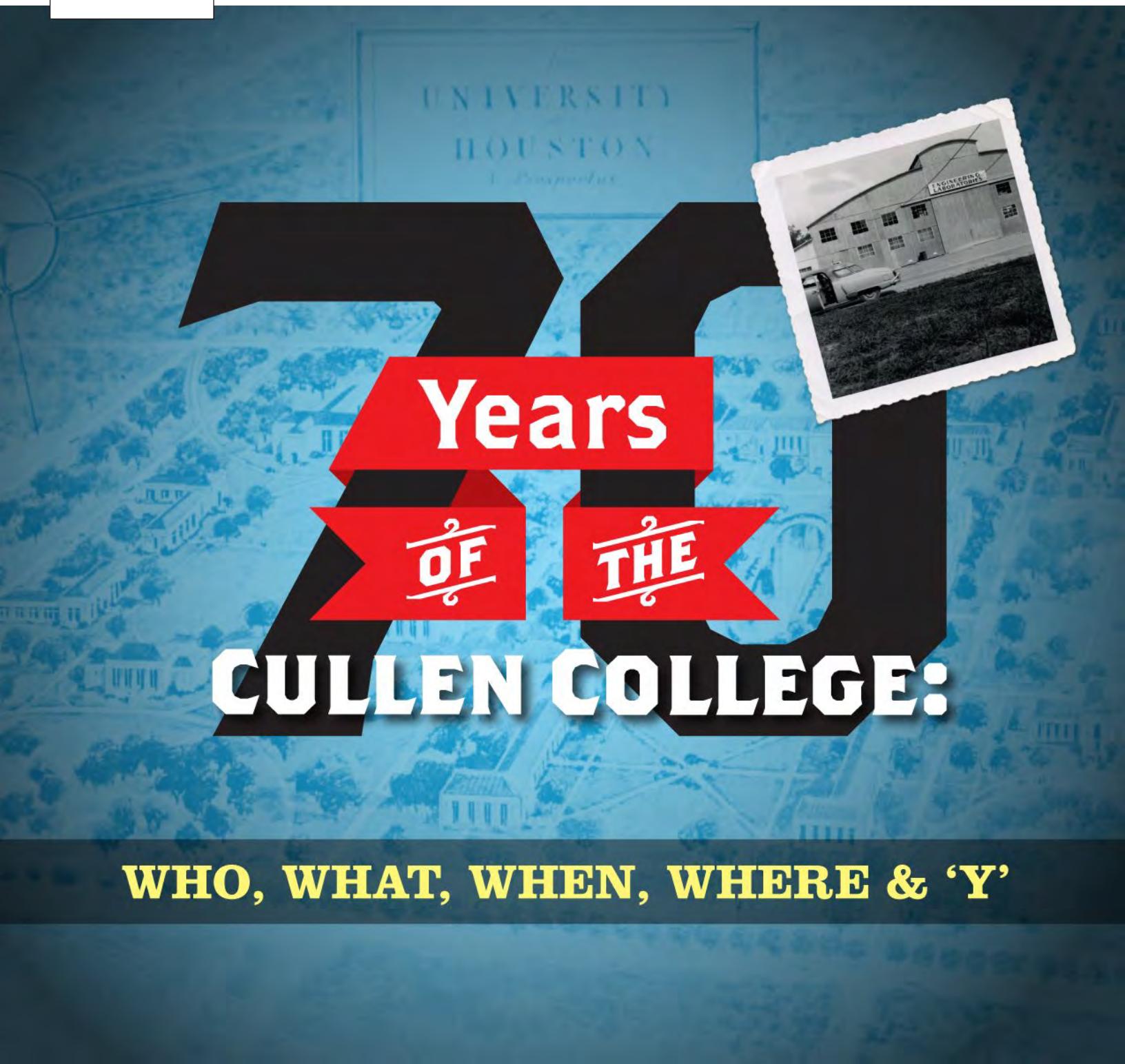


The True Believer

Alumnus Named Engineer of the Year

Lifetime Achievement

Former Student Receives Honorary Degree



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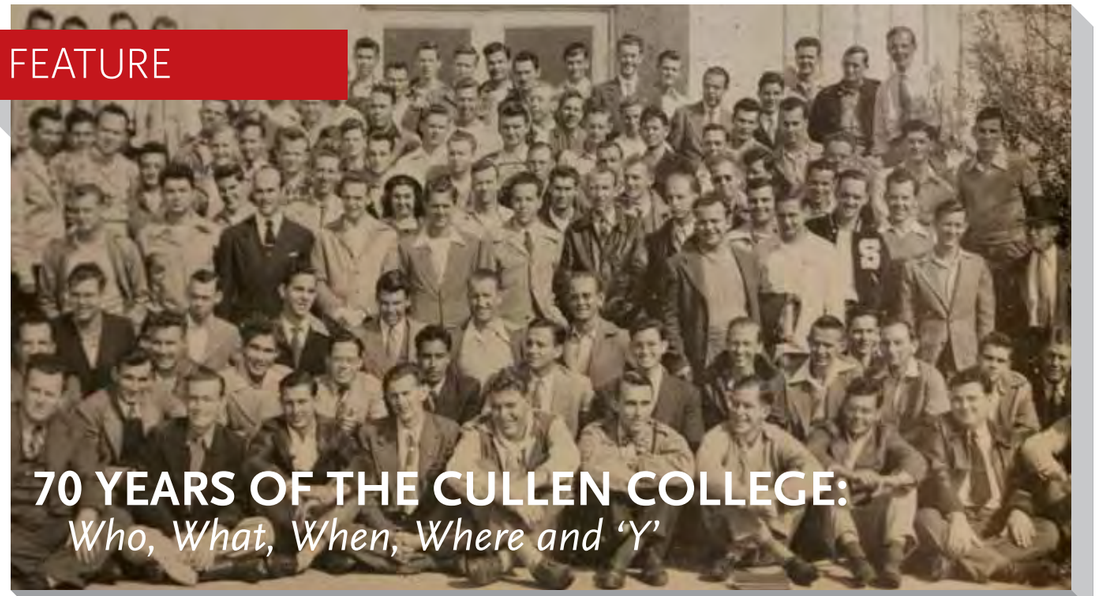

70 YEARS OF THE CULLEN COLLEGE:
Who, What, When, Where and 'Y'

What were times like in the early days of the college? Find out on ***page 6.***

UNIVERSITY of HOUSTON
CULLEN COLLEGE of ENGINEERING

The Cougar Engineer

Director
Lindsay Lewis

Editor
Toby Weber

Graphic Designer
Andy Rich

Photographers
Thomas Campbell, Andy Rich, Thomas Shea

Contributing Editors
Esmeralda Gomez, Angie Shortt

Dean
Joseph W. Tedesco

Associate Dean for Administration & Research
Frank J. "Fritz" Claydon

Associate Dean for Graduate Programs & Computer Facilities
Suresh K. Khator

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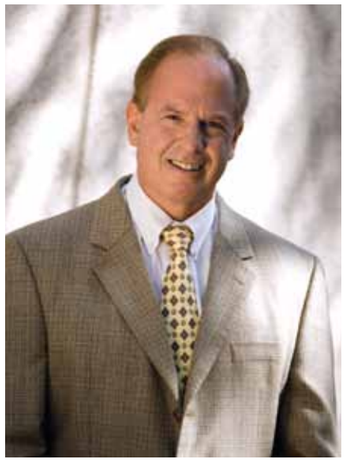
Badrinath "Badri" Roysam

INDUSTRIAL ENGINEERING
Gino Lim

MECHANICAL ENGINEERING
David C. Zimmerman (interim)

Office of Communications
Cullen College of Engineering
University of Houston
E301 Engineering Bldg. 2
Houston, Texas 77204-4009

Phone: 713-743-4220
Fax: 713-743-8240
E-mail: cougarengineer@egr.uh.edu
Website: www.egr.uh.edu



Greetings Cougar Nation!

Over the past several months, the University of Houston and the Cullen College of Engineering have had many reasons to celebrate. Since the announcement of our Carnegie Foundation ranking last January, placing UH in the top tier of research universities, several other very exciting developments have taken place. UH was named one of the Best Colleges in America for undergraduate education by *The Princeton Review* and was ranked in the top tier in several categories in the latest report from the Top American Research Universities, one of the pre-eminent organizations recognizing Tier One universities. These are remarkable accomplishments resulting from the great vision of our leadership, unwavering dedication of our faculty, staff and students, and continuous support of our alumni and friends. Thank you for your ongoing enthusiasm as we move toward national prominence!

In addition, we are celebrating the 70th anniversary of the UH Cullen College of Engineering this year. This year also marks the end of an era with the demolition of the Y Building, otherwise known as the engineering laboratory. A few months ago, we had a site study conducted in preparation for this process, some of which will begin late this fall. Though it has been rumored to be demolished for the last four decades, the Y Building demolition is imminent. We've heard many fun stories about the facility over the years and I'm sure there are plenty more, as the building itself is almost as old as the college. It is the one thing, beyond earning degrees from the University of Houston, that can unite most Cougar Engineers. Therefore, we plan to have an event to celebrate its history, along with the future direction of the college, in 2012. Stay tuned!

In this issue of *The Cougar Engineer,* we feature the early days of the college as told by some of our earliest graduates. These Cougar Engineers offer a glance back at the culture of the college as well as the focus of the profession during the 1940s and early 50s. Although times have certainly changed, Cougar spirit has long been, and continues to be, the hallmark of our growing community of Cougar Engineers.

Go Coogs!

Joseph W. Tedesco

Joseph W. Tedesco, Ph.D., P.E.
Elizabeth D. Rockwell Dean and Professor

WHAT A DIFFERENCE 70 *Years* MAKES

by Toby Weber photo by Andy Rich

Meet **David Levy**, age 16.

*Meet **GEORGE HALL**, age 86.*

David gets rides from his mom.
George gets rides from his daughter.

When David was born,
the Internet was just taking off.
When George was born,
Charles Lindbergh was still taking off.

David can't vote.
George voted for Truman.

David is still covered by child labor laws.
George is retired.

David is a 2011 Cullen College Graduate.
George is a 2011 Cullen College Graduate.

Alumnus Flies Historic Final Mission

Cullen College of Engineering alumnus **Rex Walheim** was one of four astronauts on the last space shuttle mission, July's flight of the Atlantis. Walheim earned his master's degree in industrial engineering from the college in 1989. As a mission specialist, he assisted in the shuttle's task of delivering equipment and supplies to the International Space Station as well as its investigation of a system for robotically refueling spacecraft.

Photo credit: NASA/Terry Zaperach

Rex Walheim (MSIE '89)

3rd Annual Civil and Environmental Reunion

Friday, Oct. 14, 2011

6:30 p.m. **Mixer**
8:00 p.m. **Casino Night & Auction**
10:00 p.m. **Dancing**

UH Campus Recreation and Wellness Center. Totally free. RSVP by Sept. 30 at www.egr.uh.edu/eaa/

Hosted by the
UH Engineering Alumni Association
in association with
UH Student Organizations and CEE

Reunions!

Engineering reunions are gaining in popularity! This spring, more than 100 alumni, faculty, staff and students attended the UH chemical engineering and the mechanical engineering reunions, respectively. Several hundred people attended the annual civil and environmental engineering reunion held last October and the upcoming reunion looks to be promising. Held in partnership with the UH Engineering Alumni Association, these "Connecting Alumni with Students" events not only serve as alumni reunions but networking events for current and future Cougar Engineers.

Check out the details of upcoming reunion events and 2011 Homecoming activities at www.egr.uh.edu/eaa.

Mark Your Calendar

AUG 18 — **EAA Annual Meeting & Networking Social**
6 p.m., UH Athletics/Alumni Center
RSVP to alumni@egr.uh.edu

SEP 3 — **UH vs. UCLA Tailgate**
12:30 p.m. Tailgate, Kickoff at 2:30 p.m.
EAA Pavilion at Robertson Stadium

SEP 24 — **UH vs. Georgia State Tailgate**
TBA
EAA Pavilion at Robertson Stadium

OCT 8 — **UH vs. East Carolina**
4 p.m. Tailgate, Kickoff at 6 p.m.
EAA Pavilion at Robertson Stadium

OCT 14 — **Civil Engineering Reunion**
6:30 p.m. Mixer
UH Campus Recreation and Wellness Center

OCT 22 — **UH vs. Marshall Tailgate**
TBA
EAA Pavilion at Robertson Stadium

OCT 27 — **UH vs. Rice**
5 p.m. Tailgate, Kickoff at 7 p.m.
EAA Pavilion at Robertson Stadium

NOV 19 — **Homecoming! UH vs. SMU**
TBA
EAA Pavilion at Robertson Stadium

The Blackboard

A Mathematical Brain-teaser from the Cullen College

Solve a puzzle, win a prize! In each issue of *The Cougar Engineer,* the magazine staff will present a challenge for you alums.

This Issue's Challenge:

CRACK THE CODE, WIN AN IPAD

An iPad is locked in a safe, and it could be yours...if you can figure out the combination. All you have are a few clues to help you crack the code.

- The combination consists of four two-digit numbers (xx-xx-xx-xx).
- None of the numbers in the combination begins with zero.
- Reversing the first set of numbers will get you the third set.
- There are no twos, threes, fours or fives in the combination.
- If you multiply the third set of numbers by four, you will get the fourth set of numbers.
- The first number in the first set plus the first number in the second set equals eight.
- The second set of numbers less than 20.
- The second number in the second set multiplied by the second number in the fourth set equals the first set plus one.

Email your answer to cougarengineer@egr.uh.edu by October 1. If your solution is correct, you'll be entered into a drawing to win an iPad, courtesy of the Engineering Alumni Association. Contest open only to alums of the UH Cullen College of Engineering. ***Good Luck!***

LAST ISSUE'S WINNER:
David Turnquist

David Turnquist (BSChE '06) solved the **iCue Challenge** from the Winter 2011 *Cougar Engineer* and will receive an iPod Touch courtesy of the Engineering Alumni Association. ***Congratulations David!***

Past issues of The Cougar Engineer *can be found online at egr.uh.edu/cougarengineer*

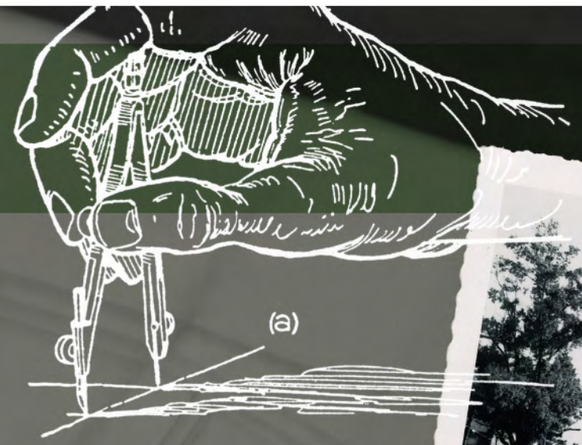
70 Years of the Cullen College: Who, What, When, Where & 'Y'

2011 MARKS THE 70TH ANNIVERSARY of the founding of the Cullen College of Engineering. Established in 1941, the college's enrollment spiked at the end of World War II, when waves of returning veterans set out to build lives for themselves (and often their newly-formed families) with financial support from the GI Bill. Several alumni from this era recently spoke with the Cullen College about their decision to enroll at UH, their classmates, professors and even the then-new engineering laboratory, today known as the Y Building.

interviews by Toby Weber | design + photo illustrations by Andy Rich

SPECIAL THANKS TO:
Ken Parr, James Brogdon and the UH M.D. Anderson Library for providing archival photos

After the War, an Education



"I never planned to get a college degree until I got in the service and saw who was getting the commissions and all the good jobs. That's when I re-considered. With the GI Bill it made it possible for me to go. UH started a spring/summer semester for the vets that were getting out of the service at the time. There were a lot of serious guys around. They had just gotten out of the service and many had gotten married. I think they made very good students, having been out for a year or two and being able to get a little maturity under their belt before they went to college."

– Paul Madeley (BSEE '49)

"My wife was engaged to a close friend of mine in the Army. He and I were together right until the last, when we got separated. He got sent to another place and was killed. She was working here in Houston. When I came back, I went to see her. We matched up well, got married and have been together since then. Because she was here in Houston working, it was just convenient to go UH. I was accepted to the University of Texas, but she could work here and I did a little bit of work while going to school."

– John Pierce (BSPE '50)

"There were hundreds of young men, primarily, going to college there. When we all arrived to register, it was overwhelming to the people in charge. They gathered us in what I think was a garden next to the student lounge while they figured out how to register us. They finally got it organized. We got registered in spite of all the numbers there. I had tried other colleges (UT, Rice, Georgia Tech). Each of those were taking only former students and football players. Grade-wise, I didn't have any problems, but openings were the issue. Had UH not been a growing school, I'm not sure where I would have gone. But they had to scramble to make it work."

– James Brogdon (BSEE '50)

"It was probably in 1946 or 1947 when I went to work in the Veterans Affairs office on campus.

I was given the job of taking [the veterans] in and helping them get started in the direction they wanted to go. They were all pretty interested in getting into school, but some of them had no idea what college was, probably. They had graduated from high school and went in the service and now were out. We had to go over the reasoning, the why and what-for of it. But they were all interested in getting started."

— Robert Dwyer (BSME '48)

A University Under Construction

"There wasn't much to the engineering lab building. We built an ammonia column in there. We had a pump and some water and ammonia tanks to make ammonium hydroxide. It wasn't very efficient, but we used that project to get some engineering design experience and to learn how to get a hold of materials: who to get it from and how to get it. That was the kind of course we had in those days."

— Richard Collins (BSChE '48)

"The facilities were very poor. There were a lot of us so we kind of overcrowded everything. But we had good professors. The night classes were taught by people in the industry. I appreciated that because they really laid it on the line for you. They were not professional teachers, but they were professional men. They helped you understand what problems you would run into and how to solve them."

– John Pierce

"You could not find a room in Houston after the war. I'm talking about '47, '48. There were three newspapers in Houston at the time and out of those three, one week there were only three ads for rooms for rent in the whole city of Houston. So they transferred up some GI barracks from a navy base and put them up on campus because there were so many GIs wanting to go to school who needed a place to live. The first apartment my wife and I had there until our daughter was born was just one room. It did have a shower and a bathroom. There was a kitchen, bedroom and living room all in one. There wasn't a closet, so you just had to put up a rod to hang some clothes on."

– Richard Collins

"There were only two permanent buildings on the campus at the time..

One was the administrative building, the Cullen building. The other was the science building. Those were the only permanent structures other than engineering lab [today known as the Y Building]. The rest of the buildings were primarily on the east side of campus. There were all single-story temporary wooden structures. They housed, as far as I know, almost all engineering and mathematics."

— James Brogdon

"Our lab experiments were very thorough and you had to be very precise. Even if you got the wrong results you had to explain what happened. I always thought that was good. I didn't take too many courses in electronic controls.

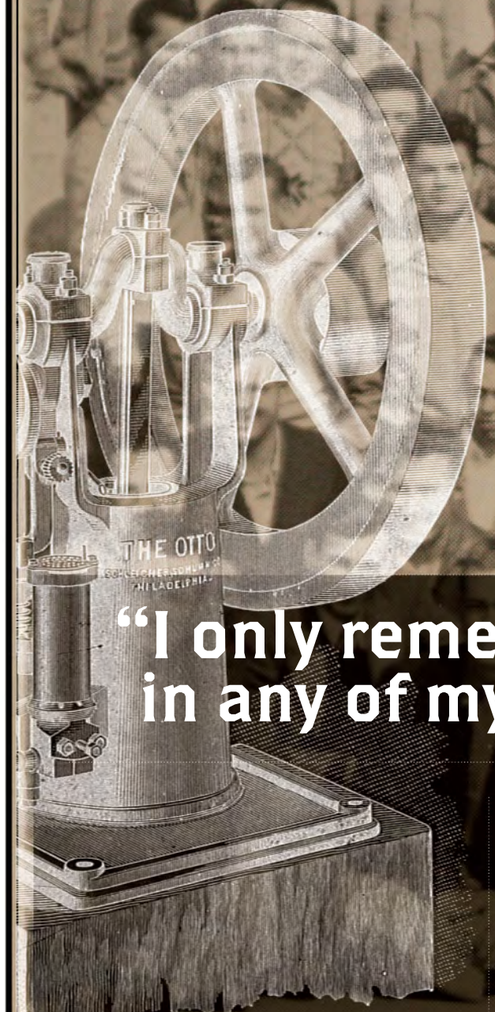
What I did take would be kind of crude nowadays, but back then it was state of the art. I remember that one of our professors got hit by an electronic door, so we had to make an electronic door opener that was foolproof, that wouldn't open in someone's face."

– Ken Menelaides (BSEE '49)

"The petro classes were very small, only about eight or 10 in a class. I really enjoyed some of my courses a whole lot. One was taught at night by a man named Les Myers. He was an excellent teacher. He was head of preventative maintenance at the Shell refinery. We only had 10 in that class and three were engineers working in that plant. Boy, he really put us through the wringer. But all of us in there were veterans. We were older students and he treated us really well. After class he'd meet us at a bar across from Robertson Stadium for a beer. He was so great."

– George Stovall (BSPE '50)

Friends and Classmates



"I only remember one woman in any of my classes." – Ken Menelaides

"When I was studying I would sit there and look out the back window of our apartment in the barracks. Right across the way, about 20, 25 feet was another apartment. That man's wife worked and they had twins. He was going to school. I'd sit there studying and hear a baby start crying. He'd get up, take care of the baby, come back and just as he'd start studying again, there'd be more crying. I guess it was the other twin. He dealt with that for a couple of months, but ended up dropping out that semester. It was just too much for him, trying to study and take care of two babies."

– Richard Collins

"I had a '42 Chevy convertible that I bought when I got here, used. This was a good car. When I'd leave people would be standing out in front of the Ezekiel Cullen building needing a ride. So I'd pick them up. I was going through downtown and was able to get them to where they were going. There weren't really any social divisions. The older universities with big fraternities and sororities would have the rich students staying together and other groups that separated themselves. We didn't have any of that. Everybody was in the same melting pot. It made it nice."

– James Brogdon

"Some of the guys used to get together on Saturday night and go out to a place on Main Street called The High Hat. They played music and you could dance. They had an open bar and you could have a beer or two. We'd meet out there on Saturday nights, bring our dates and have parties out there. I remember us all going to the Frontier Fiesta. We got together and had a dance and set up a bar in there. We did that the last two years I was there. It was fantastic. Everybody on campus was doing something there."

–Robert Dwyer

"We surveyed the reflecting pond near the Cullen Building over and over for surveying class, though we'd spend most of the time looking at girls."

—Ken Menelaides

Putting the Degree to Work

"A lot of my classmates didn't make it through. They took a couple of years and said this is taking too much time. But a lot stayed, too. I had a lot of good friends who went in the oil business just like I did. I liked the fact that at that time you weren't spending all day in your office. You could go out and supervise the field operation. It really was an enjoyable career."

— John Pierce

"I was working in research on power plants and had to work shifts. I got off of shifts so I decided to go back and work on my masters. Between the time I signed up and started my courses, I got put back on shift. I had rotating shifts, daylight, four to 12 and graveyard. I'd wake up — nighttime, morning or the middle of the day — and I didn't know whether it was time to study, go to work or go to school. I fought it for a whole year. I started my second year of my master's still on shift, but I had to drop out. I never did finish."

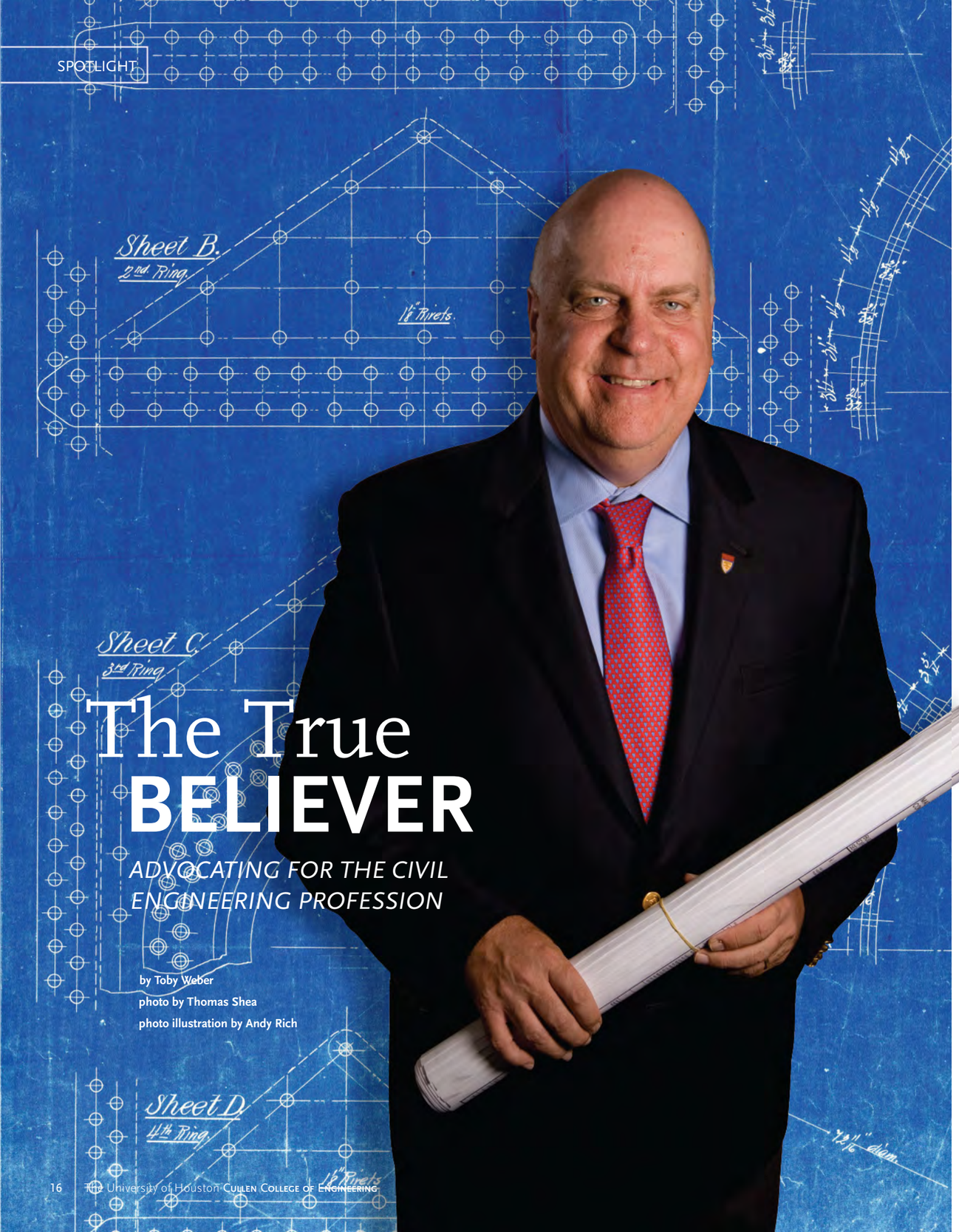
— Richard Collins

"I got a good education, I think. I was able to progress in my career. I got a job before I graduated. I graduated on a Friday at the Music Hall. That was where we held our graduation for everybody — engineering, the arts, everybody. I graduated on Friday and left town on Monday morning. I went to work for a company called Tennessee Gas Transmission Company. It turned into Tenneco, which at one point was one of the largest companies in the country in terms of assets. I eventually rose to executive vice president. That shows what somebody with a UH education can achieve."

– James Brogdon

"My assessment is that [my fellow students] were people of real determination. They wanted that education. There was no horsing around, no cutting classes and no seeing what they could get away with."

— Thomas Snedecor (BSCE '49)



The True BELIEVER

ADVOCATING FOR THE CIVIL ENGINEERING PROFESSION

by Toby Weber
photo by Thomas Shea
photo illustration by Andy Rich

As a civil engineer, Wayne Klotz (MSCE '76) sees his profession as the lynchpin of a healthy, civilized society. Take away civil engineers and you take away clean, potable running water; drivable roads; and drainage systems that prevent massive flooding. It's a noble calling, he says. "This is a career where you can make your community better. I view it as a public service as well as a profession."

These are more than just words from Klotz. As a past national president of the American Society of Civil Engineers (ASCE) and leader of a large, successful engineering firm, he's based his business and his service to the profession around this belief.

Klotz is president of Klotz Associates, a firm he co-founded in 1985 with his father, Bill, also a civil engineer. Klotz's decision to hang out a shingle grew out of an opportunity rather than a longtime aspiration. A struggling engineering firm had its assets taken over by its bank, and Klotz saw the chance to purchase not just equipment, but an employee base as well as an existing client roster.

It took about two years for the firm to completely right itself, Klotz said, but by 1987, all the major issues had been worked through. Klotz Associates has grown almost every year since, the only exceptions being during the current downturn, during which the company has held stable.

One of the reasons behind this success, Klotz said, was the decision to have nearly all design work performed by engineers instead of technicians. In fact, of the company's 120 employees, roughly 90 are engineers, and about half of those are licensed. Not only has this allowed Klotz to make skill and expertise a selling point to potential clients, it has given him a deep bench.

"I realized early on that if I hire a young engineering graduate out of college, that person has the potential to run anything in the company as long as we do a good job hiring and training and as long as they have the desire…I think that's one of the reasons we've been able to grow as we have."

While Klotz has been busy building a thriving business (not to mention raising four children with his wife, Karen), he's still made time to be an active member of his profession. He currently sits on the boards of multiple engineering associations as well as on the Engineering Leadership Board for the Cullen College. The high point of his service efforts came in 2009, when he served as ASCE's national president.

Much of Klotz's tenure was taken up by the debate over the stimulus bill in Congress, during which he advocated for greater infrastructure investment. While high-profile, that wasn't the only major undertaking of his presidency. Under Klotz's direction, sustainability was brought to the top of ASCE's agenda.

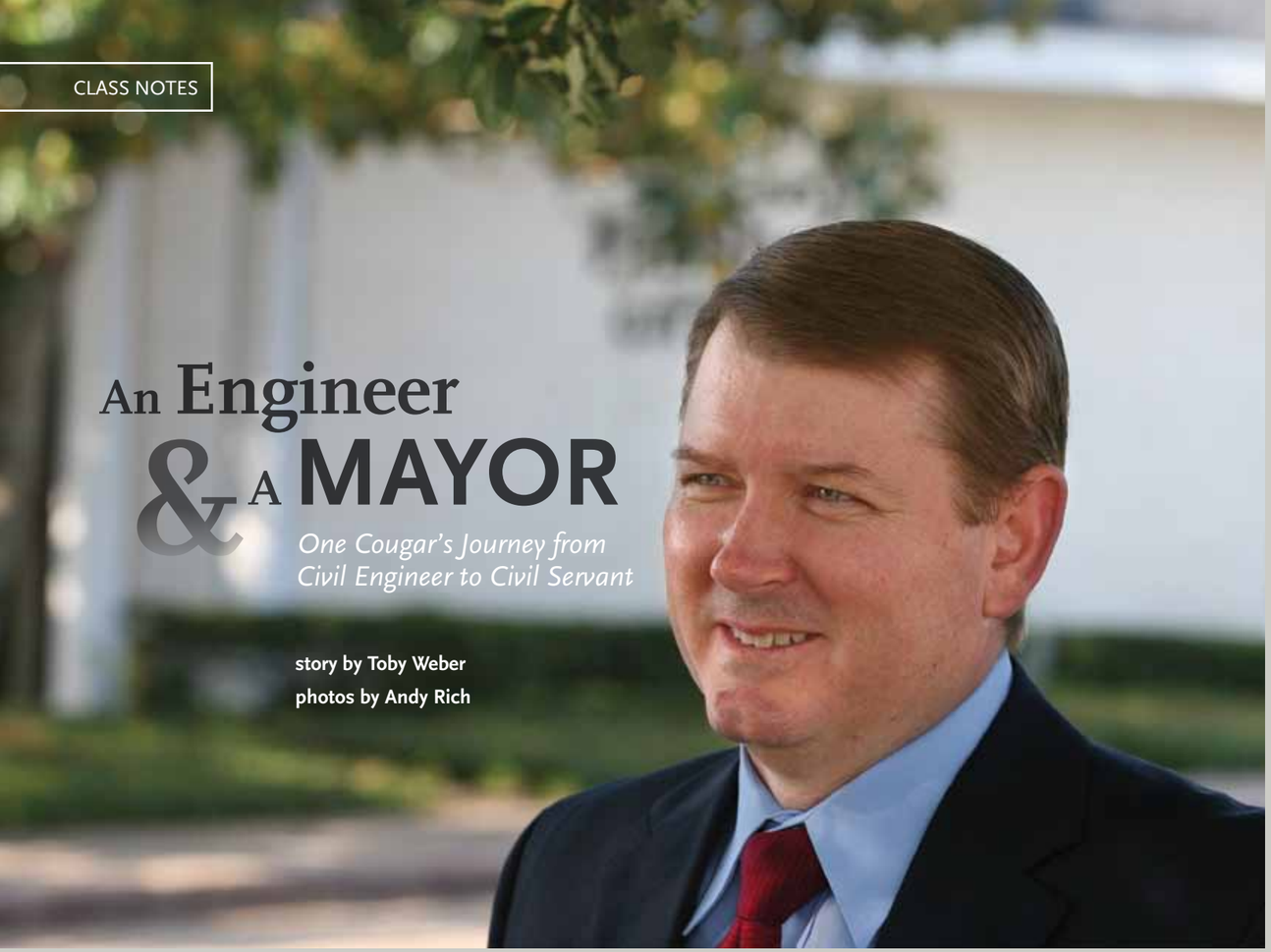
At the time, sustainability was much talked about in civil engineering circles, but not well defined. To remedy that, Klotz formed a working group to define the term in the civil engineering context. In the end, the group said that for a project to be sustainable in the design phase, engineers must focus on the "triple bottom line," factoring in not only a project's cost, but its impact on the environment and on the lives of those who live and work nearby.

Just having a definition wasn't enough, though. Klotz and the rest of the ASCE leadership also agreed to develop an online tool civil engineers could use to rate a project's sustainability. To accomplish this, the ASCE partnered with the American Public Works Association and the American Council of Engineering Companies to form the Institute for Sustainable Infrastructure. The rating tool developed by the group, Envision, was completed in just two-and-a-half years and went live in April.

That, Klotz noted, is an impressive time frame for such a large undertaking. It's not a surprise, though. As leader of ASCE, Klotz — a true believer in the importance of civil engineers and civil engineering — played a major role in setting the group's agenda. Given that projects are approved and started every day — projects that impact the environment and the lives of thousands of people — extended debate and dithering were not acceptable. Civil engineers had to push forward on such an important topic, he said.

"I feel like it is the responsibility of civil engineers as professionals to take a leadership role in how we design and implement projects. There's been a lot of money spent to develop this tool, but it's worth it. We really believe it's something we needed to do."

Klotz has been named **2011 Engineer of the Year** *by both the Houston-area E-Week committee and the Texas Society of Professional Engineers.*



An Engineer & A MAYOR

One Cougar's Journey from Civil Engineer to Civil Servant

story by Toby Weber
photos by Andy Rich

When Tommy Kuykendall (BSCE '97) took a construction job with the Texas Department of Transportation 25 years ago, he wasn't really thinking about going to college. Fast-forward to today and Kuykendall is a past president of the Houston branch of the American Society of Civil Engineers, vice president and co-owner of a 25-person engineering firm, and mayor of Fulshear, Texas.

That's a lot of change, even for a full quarter century. So what happened?

At TXDOT, he said, "I noticed that a lot of the guys who were advancing were working on getting a college degree. I realized that if I wanted to move up, I'd have to go and get my degree too."

So in 1989, Kuykendall began taking night classes at a community college in Richmond, Texas. A few years later he enrolled in the UH Cullen College of Engineering, graduating magna cum laude in 1997 with a degree in civil engineering.

Kuykendall spent the next 11 years working as a civil engineer and engineering project manager. Then, in 2009, he joined forces with Victoria, Texas-based CivilCorp, LLC. Looking to increase its presence in the Houston area, the company tapped Kuykendall as its vice president and head of its Houston office. The firm offers a full range of civil engineering and land surveying services, from roadway and transportation engineering, to planning studies, to drainage analysis and design, to water distribution systems, to right-of-way and route surveys. While CivilCorp's Houston office has only been open for two years, it has already landed some significant projects, including handling storm sewer design, ramp design, cost estimates and construction scheduling for the $310 million reconstruction and widening of Interstate Highway 35 through the city of Waco.

While Kuykendall was busy establishing his career, not to mention raising two children with his wife, Rhonda, he took on another role: that of civil servant.

Kuykendall began his service to Fulshear in 2002 in the most natural place for a civil engineer, as a volunteer member of the city's planning commission. In 2010, he was elected mayor.

For Fulshear, this is a good time to have a civil engineer at the helm. Though the city has a population of only around 1,500, it is located in one of the fastest-growing regions of the country. The city must plan wisely in order to accommodate this growth yet maintain its small-town character and charm, Kuykendall said.

"In talking to engineers or developers about projects, just having the engineering background is a plus in this position. It's been very helpful to have a knowledge base to analyze situations and make decisions," said Kuykendall.

Kuykendall has also set up a more formal structure for the management and operation of municipal functions. Under his leadership, Fulshear has hired its first city administrator and put in place a professional staff in city hall that should provide continuity from one administration to the next.

"We have a long way to go as the city grows; the needs can be overwhelming. However, my view is that if we make good decisions each day, then a year or two years from now we'll have a foundation of good decisions that will be moving us in the right direction."

1970s

D. Wayne Klotz (MSCE '76) was appointed to the Community Resilience Task Force by the U.S. Department of Homeland Security.

1990s

Rob Gabel (BSChE '93) is now senior vice president of advertising performance at Machinima Inc., a company providing online videos extracted from 3D gaming environments.

Kathy Quigley (BSME '93) is working as a project engineer for EDG Inc. Consulting Engineers on the Chevron/Sonangol Mafumeira Sul project.

Yun Doreen Chin (PhD ME '97) has been named a fellow of the American Society of Mechanical Engineering (ASME). She was one of the early explorers in flow assurance engineering development, and has helped the offshore petroleum industry to broaden the flow assurance engineering concept and develop it as an engineering discipline in the petroleum industry. She is also the recipient of an ASME/OTC Arthur Lubinsky Best Paper Award and ASME Petro/Jacobson Best Paper Award.

2000s

Brian Y. Webster (MIE '00) was named the reliability manager of the Shell Puget Sound Refinery in Anacortes, Wash. and was recently certified by ASQ as a Certified Reliability Engineer (CRE).

Andrew Z. Weaver (BSME '01) was made a partner at Novak Druce + Quigg LLP, an intellectual property law firm with offices in Houston, Washington, D.C., San Francisco and West Palm Beach.

Brian Daly (BSChE '02) recently accepted a job with Plant Engineering Services working in the Flint Hill Resources refinery at Pine Bend, Minn., where it is really cold.

Aimee Edwards (BSCE '03) became a licensed Professional Engineer in December 2010. She is a project engineer at Jones & Carter, Inc.

In Memoriam

Douglas H. Wheeler (BSME '50) passed away March 25, 2011 at the age of 91. He spent the majority of his life serving his country and earned six Battle Star medals during his World War II duty. After graduating from UH, he was a loyal employee of Shell Oil Refinery in Deer Park, where he once served as city engineer and helped design the town plan.

Robert Moroney (BSChE '57) passed away March 30, 2011 at the age of 79. He was a registered professional engineer as well as a longtime employee of Hughes Tool Company. He was a very active scout master for The Boy Scouts of America's Troop 40 at St. Rose of Lima.

Joe Alvarez Jr. (BSEE '71) passed away June 14, 2011 at the age of 68. He served in the U.S. Navy as a cryptologist in the '60s, and he co-owned and operated Profax in Pearland, Texas, since graduation.

Fred Downs (BSEE '87) passed away on April 16, 2011 at the age of 53. He worked in the oil and gas industry for several years.

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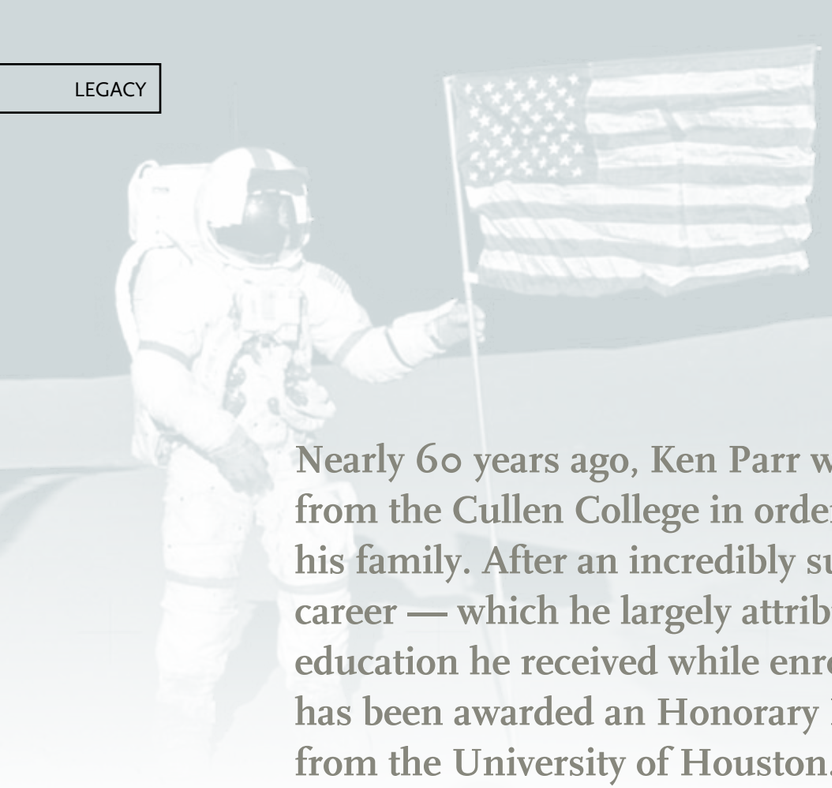


Nearly 60 years ago, Ken Parr withdrew from the Cullen College in order to support his family. After an incredibly successful career — which he largely attributes to the education he received while enrolled — he has been awarded an Honorary Degree from the University of Houston.

The Achievement of a Lifetime

story by
Toby Weber

photos by
Thomas Campbell

College degrees are usually earned over the course of a few years. In Ken Parr's case, a few decades is actually closer to the truth.

Parr is a recipient of a 2011 Doctorate of Humane Letters from the University of Houston, a recognition that comes nearly 60 years after he enrolled in the Cullen College of Engineering. Though family and work obligations prevented him from completing his degree, the education he received at the Cullen College launched Parr on an incredible career as an inventor and entrepreneur.

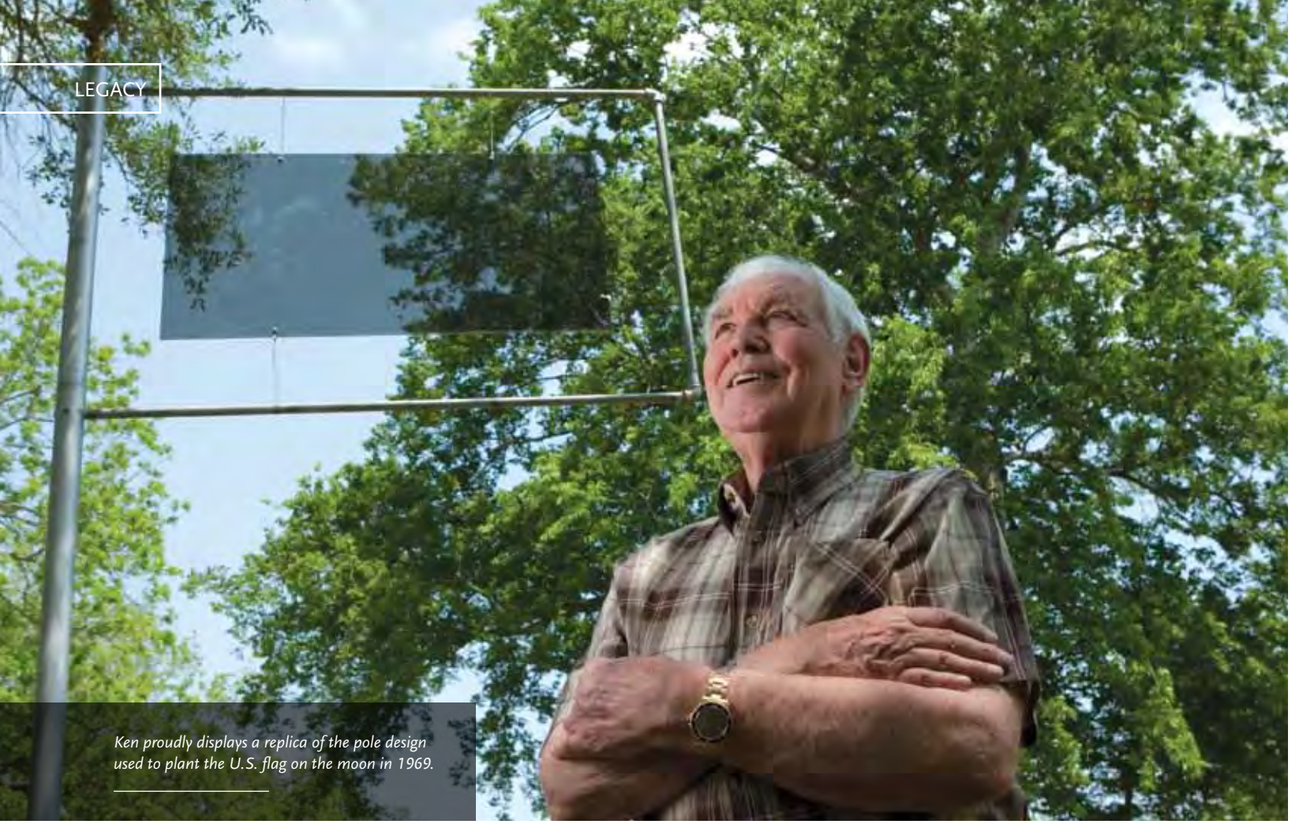
While his career path has certainly been the road less traveled, go back to Parr's early days at UH and you'll find a story shared by thousands of other Cougars, particularly those from that era.

In the fall of 1952, Parr was a Navy veteran with a young wife and a full-time job. Despite these responsibilities, he set out to earn his degree, enrolling in the industrial engineering program at the Cullen College. With a 45-hour a week job, getting his bachelors was never going to be simple. And the task got even more complicated when his wife, Corine, gave birth to the second of their three sons.

By the end of the 1953–54 academic year, work, school and parenting had brought both Ken and Corine to the end of their ropes.

"Ken would get up at six. Then there was work from eight to five, school from six to 10 then study 'til one or two in the morning," recalled Corine. "We did that for two years. After that we figured out that it would take another 10 years for him to get his degree. We realized that we just couldn't do it."

So Ken withdrew from the Cullen College. It was a hard choice, he said. But as disappointed as he was in not completing



Ken proudly displays a replica of the pole design used to plant the U.S. flag on the moon in 1969.

Sometimes there will be something on TV that shows all that mankind has accomplished, and they'll almost always show the flag on the moon. It still gives me goose bumps.

his degree, Parr's time at UH was not wasted. "My time at the University of Houston taught me how to use my mind to solve problems of a mechanical nature," he said. "It allowed me to be really good at what I ended up doing."

Much of the success Parr attributes to his time at UH came during his two decades with ESCO, a firm he joined in 1963. At the time of Parr's hire, the company was a small distributor of mechanical seal products for the oil and gas industry. It had plans to offer maintenance and repair services to its clients and tapped Parr as its first and, initially, only machine shop employee. The task of building that side of the business fell almost entirely to him. "When I came on board, they didn't have anything, not even a drill bit," he said. "So I started buying equipment and doing the work itself."

During the next 20 years Parr helped grow ESCO from a small firm with just a handful of employees to a 139-person operation with a machine shop that housed the equipment and expertise to perform a wide array of tasks.

Much of this growth resulted from what can best be described as Parr's innate genius for all things mechanical. At ESCO and later with his own company, he personally designed many of the products being sought by clients from a wide range of industries. These included everything from cardiopulmonary devices for a medical device manufacturer, to an inspection tool used in the 48-inch, 800-mile Alyeska pipeline — one of the country's largest and most vital oil pipelines — to a photography system for quickly recording courthouse documents on microfilm.

While all of these are notable, they don't even come close to Parr's highest profile efforts. Those belong to the work he performed for NASA during the height of the Space Race. That ESCO was able to work with NASA at all was due to Parr's incredible efforts. In expanding the company's machine shop, he developed the metalworking capabilities required by the space agency. He then led the company's drive to earn approval to work with NASA and then either personally completed or oversaw all NASA assignments.

At ESCO, Ken Parr led the team that designed and built the flagpole planted in the moon on the Apollo 11 Mission. An image of the flag during the mission (top) and Parr with a co-worker holding the flagpole (second from top). Parr with his wife, Corine (second from bottom), and Corine on the UH campus in the early 1950s (bottom).

Given that ESCO landed its first NASA contract in 1968, Parr ended up playing a role in what were literally some of the biggest moments in human history.

He built components for space suits and the lunar rover. And he also built the flagpole planted into the surface of the moon during the Apollo 11 mission, one of the accomplishments he's most proud of. "Sometimes there will be something on TV that shows all that mankind has accomplished, and they'll almost always show the flag on the moon. It still gives me goose bumps."

In addition to his contributions to the moon landing, Parr's most important effort on behalf of the space program grew out of an emergency on Skylab, the United States' first space station. During its launch on May 14, 1973, a portion of the station's meteorite shield/sunshade was destroyed. As a result, once in orbit temperatures inside Skylab spiked, making it uninhabitable. Even worse, if not repaired quickly the high temperatures threatened to cause the release of toxic gasses in Skylab, making the multi-billion dollar station permanently unusable.

A solution was devised in a matter of days. Replacing the sunshade would be a large rectangular parasol deployed in orbit. One of the key elements of the parasol was its deployment mechanism. This mechanism had to be designed to be inserted through the hole in the sunshade, open the parasol once and then lock in place permanently.

Much of this task fell to Parr, who designed and built portions of the mechanism in short order. Just 11 days after Skylab's launch, astronauts with the Skylab 2 mission were sent into orbit, where they successfully deployed the parasol, saving the space station.

Parr is not only a gifted mechanical designer, he is also a skilled businessman. In fact, at ESCO he showed such impressive business acumen that he rose to the post of vice president and partner. In these roles, he was responsible for a huge portion of the company's operation, including all manufacturing, purchasing, government compliance, quality control, equipment purchases and personnel.

In 1982, Parr left ESCO, selling his stake back to its founder and shortly thereafter opening his own successful machine shop. There, Parr continued to develop devices and tools for a number of clients and industries. These included prototypes for Shell Oil Company's research and development arm, tools used by Schlumberger for downhole and directional drilling, and medical implants for local health care providers.

At the same time, though, Mr. Parr was looking for new challenges, as well as a way to secure his family's long-term financial future. He settled on the formation of a private lending business. Through that business, which has proven to be quite successful, he has participated in roughly 700 real estate transactions, plus an uncounted number of other transactions such as automobile and construction loans. "We've helped people finish building their homes, buy cars they needed and prevent IRS liens on their property," he said.

In recent years, Parr has sold his machine shop and scaled back his private lending and real estate work. Living in semi-retirement in Richmond, Texas, his home (which he designed himself) holds numerous mementos of his career: a photo of the moon landing; a citation from NASA commending him for his contributions to the agency; pictures of the homes he's helped build. Parr has lived a life marked by impressive, even historic accomplishments, so many of which he credits to his time at the University of Houston.

"I've always felt very close to UH," he said. "The education I got there qualified me for the job at ESCO, which turned out to be a very important part of my life. I'm very thankful for all that I got from the university."

Engineering Honors

The University of Houston Cullen College of Engineering and the Engineering Alumni Association honored seven college alumni and professors at its annual awards gala in June.

The alumni awards program was established in 1987 to recognize alumni, faculty and friends of the Cullen College and the Engineering Alumni Association for significant contributions to society and the engineering profession.

Underwritten by SpawGlass Construction Corp., the gala was also sponsored by Jim L. Culpepper & Associates P.C.; Applied Optoelectronics, AECOM, BP, Cobb, Fendley & Associates, Delvin Dennis, P. E., Fluor, Garza + McLain Structural Engineers, Lockwood, Andrews & Newnam Inc., Novak Druce + Quigg LLP, Rafael Ortega, P.E. and the UH departments of chemical and biomolecular engineering, civil and environmental engineering, electrical and computer engineering, and mechanical engineering.

HOUSTON ALUMNI ASSOCIATION
ENGINEERING ALUMNI

Jesse G. Gonzalez, *P.E.*

Lifetime Achievement Award

Gonzalez graduated from UH with a B.S. in civil engineering in 1969. A 40-year veteran of SpawGlass, prior to his promotion to chairman of the board, Gonzalez held the position of president of SpawGlass or one of the SpawGlass Companies since 1979. He is a Life Member of the UH Alumni Organization and serves on the UH Civil and Environmental Engineering Advisory Board and the Engineering Leadership Board.

Micky T. Fleischer, *Ph.D.*

Distinguished Engineering Alumni Award

Fleischer received his M.S. and Ph.D. in chemical engineering from UH in 1975 and 1978, respectively. He then went to work for Shell and spent more than 26 years in research, development, projects, manufacturing, business, finance and management. He has taught at UH since 1975 and won five teaching awards. Since 2000, Fleischer has been the co-owner and CEO of Fleischer International Trading, a private importer and distributer of wines from all over the world.

Rafael Ortega, *P.E.*

Distinguished Engineering Alumni Award

Ortega, one of the nation's leading experts on large-diameter pipelines, is vice president of Lockwood, Andrews & Newman Inc., which he joined in 1981 after receiving his B.S. in civil engineering from UH. In 2008, he was named "Most Valuable Professional in the Private Sector" by the Gulf Coast Trenchless Association. He is a member of the Academy of Distinguished Civil and Environmental Engineers at UH and is a past president and founding board member of the UH Engineering Alumni Association.

Gabriel Garza, *P.E.*

Distinguished Young Engineering Alumnus Award

Garza earned his B.S. and M.S. degree in civil engineering from UH in 1994 and 1996, respectively. His graduate research focused on concrete panels with three-dimensional welded wire reinforcement. Garza worked for three consulting engineering firms prior to co-founding Garza + McLain in 2006 with Anthony McLain. The firm employs 10 people and recently expanded to Corpus Christi.

Stefan Murry, *Ph.D.*

Entrepreneur/ Innovation Award

Murry received his Ph.D. in electrical and computer engineering from UH in 1999. He and his primary advisor, Prof. Thompson Lin, founded Applied Optoelectronics Inc. that same year. By 2003, it had developed a line of laser products targeted at the emerging market for fiber-optic transmitters for cable television applications. AOI purchased two firms based in Asia between 2006 and 2007. Today, AOI is a profitable company with approximately $50 million in annual revenue and 700 employees in three countries.

Karolos Grigoriadis, *Ph.D.*

Abraham E. Dukler Distinguished Engineering Faculty Award

Grigoriadis is a professor of mechanical engineering and director of the Aerospace Engineering Program at UH. His research focus includes the modeling, analysis, design optimization and control of mechanical and aerospace systems. He has worked on projects sponsored by NSF, NASA, the U.S. Army, and aerospace and automotive companies. He has authored or co-authored over 180 journal and proceeding articles, five book chapters and three books. He is the recipient of several national and university awards.

William F. Fendley, *P.E.*

Roger Eichhorn Leadership Service Award

Fendley co-founded and currently sits on the board of directors for Cobb, Fendley & Associates Inc. He earned his B.S. in civil engineering from UH in 1971. Fendley currently holds leadership positions in professional engineering organizations at the national, state and local levels. He is also director of the Waller County Transit Authority and volunteers at the UH Cullen College of Engineering as a member of the Engineering Leadership Board and the Civil Engineering Industrial Advisory Board.

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