the Gear

The Gear of Theta Tau, Fall 2014 ENGINEERING LEADERS *for*

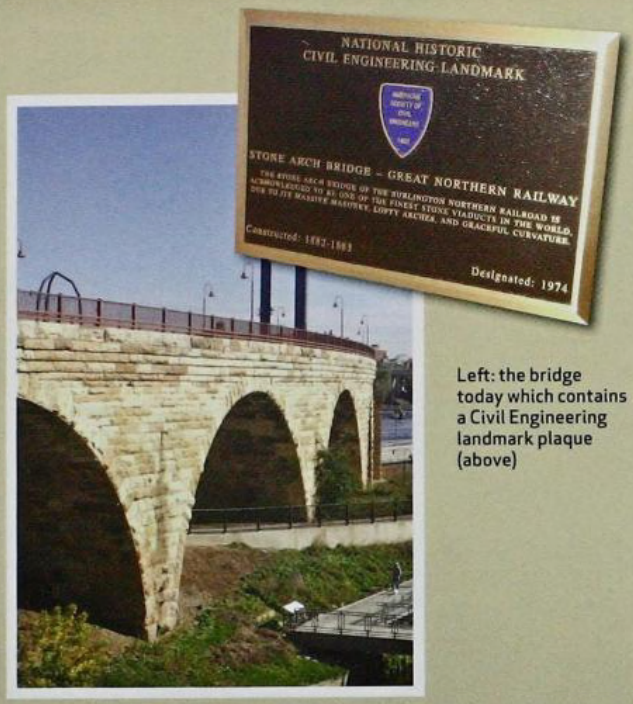
Unparalleled SERVICE

Robert Eugene Pope

September 10, 1931 - March 2, 2014

Stone Arch Bridge

The oldest symbol of the fraternity still in use is the coat of arms adopted in 1906, and the image in the shield was inspired by the Stone Arch Bridge in Minneapolis, Minn. The Stone Arch Bridge is the only bridge of its kind over the Mississippi River and is made of native granite and limestone. Built by railroad baron James J. Hill in 1883, the bridge allowed for increased movement of people and goods across the river. It served as a working railroad bridge until 1965 and is now used as a pedestrian and bicycle bridge. It is a historic civil engineering landmark. ⊗



Left: the bridge today which contains a Civil Engineering landmark plaque (above)

Stone bridge over the Mississippi, Minneapolis, Minn., in 1905

Photo courtesty of Detroit Publishing Co.

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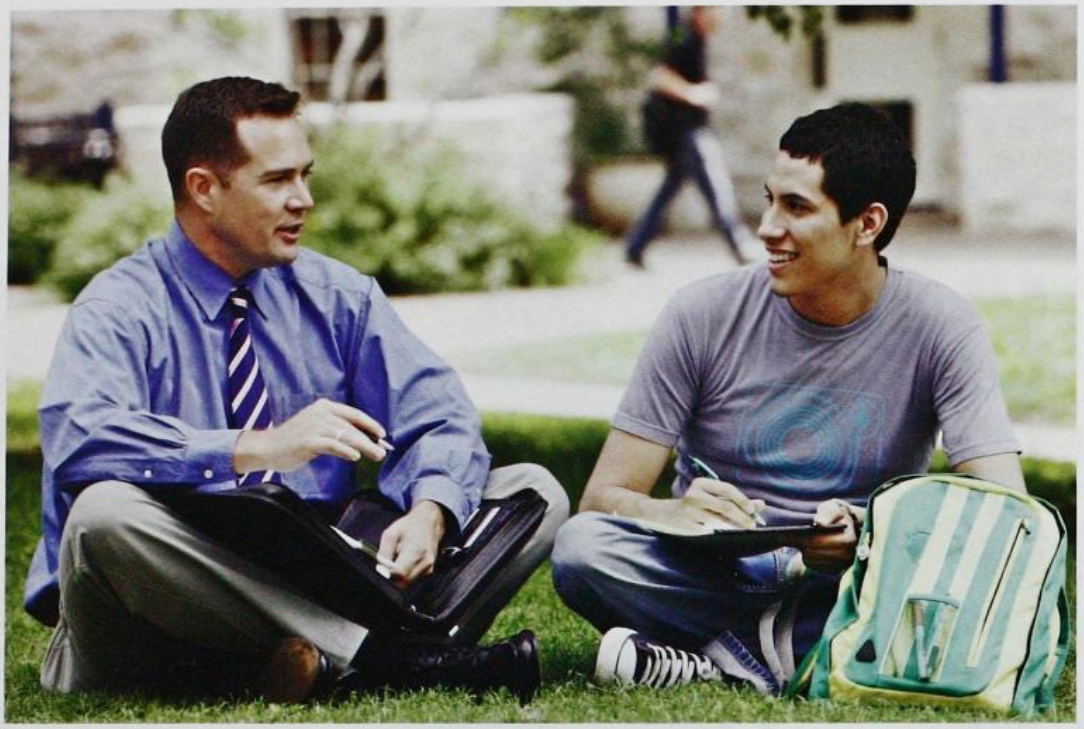


Thinking about Volunteering?

THETA TAU IS LOOKING FOR BROTHERS TO VOLUNTEER for the national fraternity. It is an incredibly rewarding experience that allows alumni to stay connected to Theta Tau and its many chapters after graduation. Below are some of the current positions we have open.

» **Chapter Adviser:**
Working with a colony or chapter to follow Theta Tau policies and successfully implement the balanced program of community service, professional development and brotherhood; leading by example, serving as a positive role model, mentoring and providing advice.

» **Colony Director:**
Providing oversight and mentoring for colony members. Working with colonies to follow Theta Tau policies and successfully implement the balanced program of community service, professional development and brotherhood; leading by example, serving as a positive role model, mentoring and providing advice.

» **Communications/PR Director:**
Coordinating our online presence, looking for ways to publicize Theta Tau and deciding on the best social media methods or other ways to distribute stories. Would work with the web committee on implementation.

» **Web/technology committee:**
Working with the Central Office to maintain thetatau.org, researching online collaboration tools and helping chapters with their website and online communication needs.

» **Alumni committee:**
Helping chapters develop alumni programming, supporting alumni clubs and interfacing with the National Alumni Club to plan and support national events.

» **Professional Development committee:**
Helping chapters develop their professional development programming and possibly plan a national professional development event.

If any of these positions interest you or if there is another way you might want to volunteer, please contact the Grand Vice Regent, Matthew Clark, at matthew.clark@thetatau.org or 412-685-4156. He will be happy to answer any questions you may have, provide you with the volunteer commitment form, and get you plugged into the right volunteer position. ⊗

Facebook

Theta Tau - Omicron Delta Chapter hosted a "Pi Eating" contest as part of the **NERD Olympics**, as Rutgers University celebrates Engineers Week - EWeek! with David Andres, Matt Guarino and Daniel Hillman.

Congratulations to Chi Chapter's four **winners** at the University of Arizona's Senior Design day.

Instagram

Building homes
#thetatau
#springbreak
#teamwork
#florida #ucf

Digits

3.4 Million

People who die each year from a water-related disease. That is nearly the entire city population of Los Angeles.

read more on pg. 13

60

Years of service by Robert Eugene Pope

read more on pg. 8

00:45

Minimum seconds each Rube Goldberg Machine was required to run in Xi Gamma's inaugural contest at Texas A&M.

read more on pg. 17

250+

"Ravers" in the Cooper Library at Clemson University during Theta Tau's *The Silence Returns*

read more on pg. 15

Now Soliciting Resource Feedback

ATTENTION CURRENT AND FORMER CHAPTER OFFICERS!

The Officer Training Committee is currently soliciting input from past and current chapter officers to help with developing more accessible and up-to-date training resources. The end goal is to generate both a wiki-style webpage and a series of position-specific PDF guides for students to use, as well as provide videos and other resources to better help students serve in higher capacities within their chapters.

A poll will be made available on our Facebook group, ThetaTauOTC, to gather information from brothers with past experience in leadership roles. Please check it out and lend us your insight!

If you would like to be a part of the committee or have any questions about the project, please contact training@thetatau.org. We hold monthly progress meetings the first Wednesday of every month at 8 p.m. EST at thetatau.webex.com.

Help us build better leaders in engineering! ⊗

All-Academic Team

FOUNDATION NAMES INAUGURAL ALL-ACADEMIC TEAM

THE THETA TAU EDUCATIONAL FOUNDATION is pleased to announce the inaugural members of its All-Academic Team. All members of the team earned at minimum 3.0 GPA in the previous semester and are actively engaged in their chapters. Congratulations to all our Academic Team Members!

One person from each Theta Tau region was named Team Captain and received a scholarship from the Educational Foundation.

REGIONAL TEAM CAPTAINS:

Brittany Brumback
The George Washington University - Biomedical, '16 - Atlantic

Ron Sutter
University of Toledo - Electrical and Computer Science, '15 - Great Lakes

Michael Silberling
University of Florida - Computer Science, '15 - Gulf

David Loder
Purdue University - Electrical, '14 - Midwest

Sean Reidy
University of Pennsylvania – Mechanical, '15 - North East

Carolyn Lennon
Clemson University - Bioengineering, '14 - South East

Ling Yeung
University of California, Berkeley - Chemical, '14 - Western

Nicholas Page
Texas A&M – Aerospace, '16 - Central

TEAM MEMBERS:

Nofal Abbas
Binghamton University - Mechanical, '16

Juan Aljure
Virginia Tech - Mechanical, '15

Lauren Auerbach
George Washington University - Mechanical, '16

Maria Begazo Quiroga
Virginia Tech - Industrial & Systems, '14

Trevor Bennett
Ohio University - Computer Science, '16

Jake Bennett
University of Illinois - Chemical and Biomolecular, '14

Nathaniel Bird
Vanderbilt University - Civil, '15

Brittany Brumback
The George Washington University - Biomedical, '16

Lisa Bryant
University of Nevada, Reno - Civil, '15

Sam Casey
Michigan Technological University - Chemical, '17

Steven Chen
Rutgers University - Mechanical and Aerospace, '15

Ankur Choksi
Rutgers University - Materials Science and Engineering, '16

Jonathan Cole
University of Nevada, Reno - Civil, '14

Stephen Collins
University of South Florida - Electrical, '14

Ossman Cossio
University of Virginia - Biomedical, '14

Amy Cunningham
University of California, Davis - Civil and Environmental, '14

Carlo C del Mundo
Virginia Tech - Computer, '14

Rocky Diegmiller
University of Pennsylvania - Chemical & Biomolecular, '15

Thanh Do Ngoc
University of California, Berkeley - Civil, '17

Kristen Duda
University of Pennsylvania - Materials Science and, '16

Kelsey Duncomb
Smith - University of Pennsylvania - Electrical, '15

Ryan Endres
University of Kansas - Aerospace, '15

Paul Nathan Enick
University of Pittsburgh - Bioengineering, '15

Miranda Ferguson
Miami University - Software, '16

Alexander Friedman
Virginia Tech - Electrical, '15

Jonathan Gaillard
University of Virginia - Biomedical, '14

Caytlin Gale
University of Minnesota - Biomedical, '15

Steven Geller
University of Florida - Chemical, '16

Edward Gordon
Miami University - Biomedical, '15

Matthew Guarino
Rutgers University - Mechanical, '15

Breanna Henk
University of Minnesota - Electrical, '14

Devesh Hira
Hofstra University - Industrial, '15

Deanna Huertas
University of South Florida - Industrial, '16

Richard Hwang
University of California, Berkeley - Electrical, '14

Katharine Johnson
University of Florida - Industrial and Systems, '16

Kyle Johnston
Michigan Technological University - Biomedical, '15

Sikai Kang
Stony Brook University - Electrical, '14

Taylor Killian
University Of Toledo - Electrical, '15

Andre King
University of California, Berkeley - Electrical & Computer Science, '16

Alec Kornblum
North Carolina State University - Chemical, '15

Kathryn Krieger
University of Minnesota - Industrial and Systems, '15

Shreyas Krishna
University of Central Florida - Electrical, '14

Alex Lancaster
University of Michigan - Computer Science, '15

David Lecko
The University of the Pacific - Engineering Management, '15

Carolyn Lennon
Clemson University - Bioengineering, '14

Hongyi (Harry) Li
University of California, Berkeley - Computer Science, '14

Dorothy Libring
Rutgers University - Civil and Environmental, '14

Vincent Lock
Stony Brook University - Electrical, '14

David Loder
Purdue University - Electrical, '14

Thomas Lynn
University of Colorado at Boulder - Applied Math and Chemical, '14

Members of the All-Academic Team earned a minimum 3.0 GPA in the previous semester

Marlene Macron
Virginia Tech - Mechanical, '16

Meher Malik
Virginia Commonwealth University - Biomedical, '14

Tyler Martin
University of Florida - Materials Science, '15

Rachel McFalls
Mississippi State University - Aerospace, '14

Sean McGinn
Binghamton University – Computer, '15

Kshitij Singh Minhas
Rutgers University - Mechanical, '15

Eric Moe
University of Pittsburgh - Bioengineering, '15

Mohamad Mohamad
The Ohio State University - Chemical, '15

Evelyn Mojica
Florida International University - Mechanical, '16

Jordan Moran
Miami University - Mechanical, '15

Andres Mujica
University of Central Florida - Electrical, '15

Vishnu Muthiah
University of Virginia - Systems and Economics, '16

Nicholas Page
Texas A&M University - Aerospace, '16

David Parker
Clemson University - Industrial, '15

Parth Patel
Rutgers University - Computer, '14

Allison Pearce
University of Pennsylvania - Computer Science, '14

Tiffany Pifher
Arizona State University - Biomedical, '15

Maria Margarita Portilla
Clemson University - Bio-Electrical, '15

Stephen Pratt
University of Rhode Island - Mechanical, '15

Samantha Riccio
University of Central Florida - Environmental, '14

Aaron Richter
University of Minnesota - Biomedical, '16

Daniil Rohov
George Mason University - Computer, '16

Lauren Ryan
The George Washington University - Biomedical, '16

Sheel Sanghvi
Rutgers University - Material Science, '14

Elizabeth Scheig
University of Alabama - Mechanical, '16

Nicholas Sharp
Virginia Tech - Science and Mechanics, '15

Michael Silberling
University of Florida - Computer Science, '15

Casey Silver
University of Virginia - Computer Science, '14

Ashley So
Rutgers University - Biomedical, '14

David Sonka
Texas A&M University - Petroleum, '16

Madeline Sullivan
University of Florida - Mechanical, '14

Ron Sutter
University of Toledo - Electrical and Computer Science, '15

Rendy Tejada
Stony Brook University - Mechanical, '14

Andrew Tennenbaum
University at Buffalo - Electrical, '14

Soley Thorsteinsdottir
University of Iowa - Civil, '14

Ekaterina Tolstaya
University of Maryland, College Park - Electrical, '16

Nicholas Tsirakis
Binghamton University - Computer, '15

David Vaughn
University of Central Florida - Aerospace, '14

Kendall Welling
University of Nevada, Reno - Geological, '16

Ling Yeung
University of California, Berkeley - Chemical, '14

Daniel Yoder
University of Central Florida - Electrical, '16

Zhuo Zhang
Johns Hopkins University - Electrical, '16

Mitchell Zink
University of Maryland, College Park - Mechanical, '14

The Importance of *Effectively Communicating* Our Work to Others

by Aaron Chu, Southern Methodist (Tau Beta) '15

AFTER ARRIVING IN GENEVA, I boarded tram 18 and headed west towards the border of Switzerland and France. As I neared the final stop of the tram, I was greeted by the Globe of Science and Innovation. After my 15 hour journey, I finally arrived at my final destination: CERN and the Large Hadron Collider!

CERN, or the European Organization for Nuclear Research, is the world's largest physics lab and is in charge of running the Large Hadron Collider (LHC). The Large Hadron Collider is the world's largest particle collider at 27 kilometers in circumference. The collider takes atomic particles and speeds them up to nearly the speed of light. At this high velocity, the particles are then smashed together inside detectors that lie along the LHC. Data from these high-powered collisions is then used to help scientists gain a better understanding of particle physics and the early composition of our universe.

So many scientists and engineers are unable to tell non-engineers what they have accomplished or what they are doing.

When the scientists at CERN conduct their experiments with the Large Hadron Collider, there is an extremely high volume of data (approximately one petabyte per second!) In order to obtain all of this data, optical transmitters transfer this data from the detectors through optical fibers a safe distance away to be processed. My work as an undergraduate researcher is to test transmitters to see if they would be viable for use on the LHC. It was as a result of my work with these laser transmitters that I obtained the opportunity to visit CERN courtesy of the Engaged Learning Program and Undergraduate Research Assistantship program at Southern Methodist University.

I learned an incredible amount while I was there, to say the least. I spent a full week in Switzerland going to museums and tours at CERN as well as talking with some of the faculty and researchers there. The highlight of my trip was when I was given the opportunity to go one hundred meters underground to see ATLAS. The ATLAS detector, which is one of the two main detectors that capture data from particle collisions, is basically a high-powered camera that takes snapshots of the particle collisions. While underground, I also got to see some of the computing rooms that process the billions of "snapshots" that are produced when the Large Hadron Collider is functional.

I learned so much from this trip, and the greatest takeaway from my trip is actually unrelated to the accomplishments of CERN. Nearing the end of my trip, I met Professor Mikado, a visiting researcher from Japan. We had both been on the ATLAS detector underground tour, and he had noticed that I was wearing my Southern Methodist University sweatshirt. He was curious about my interest in physics and engineering as an undergraduate.

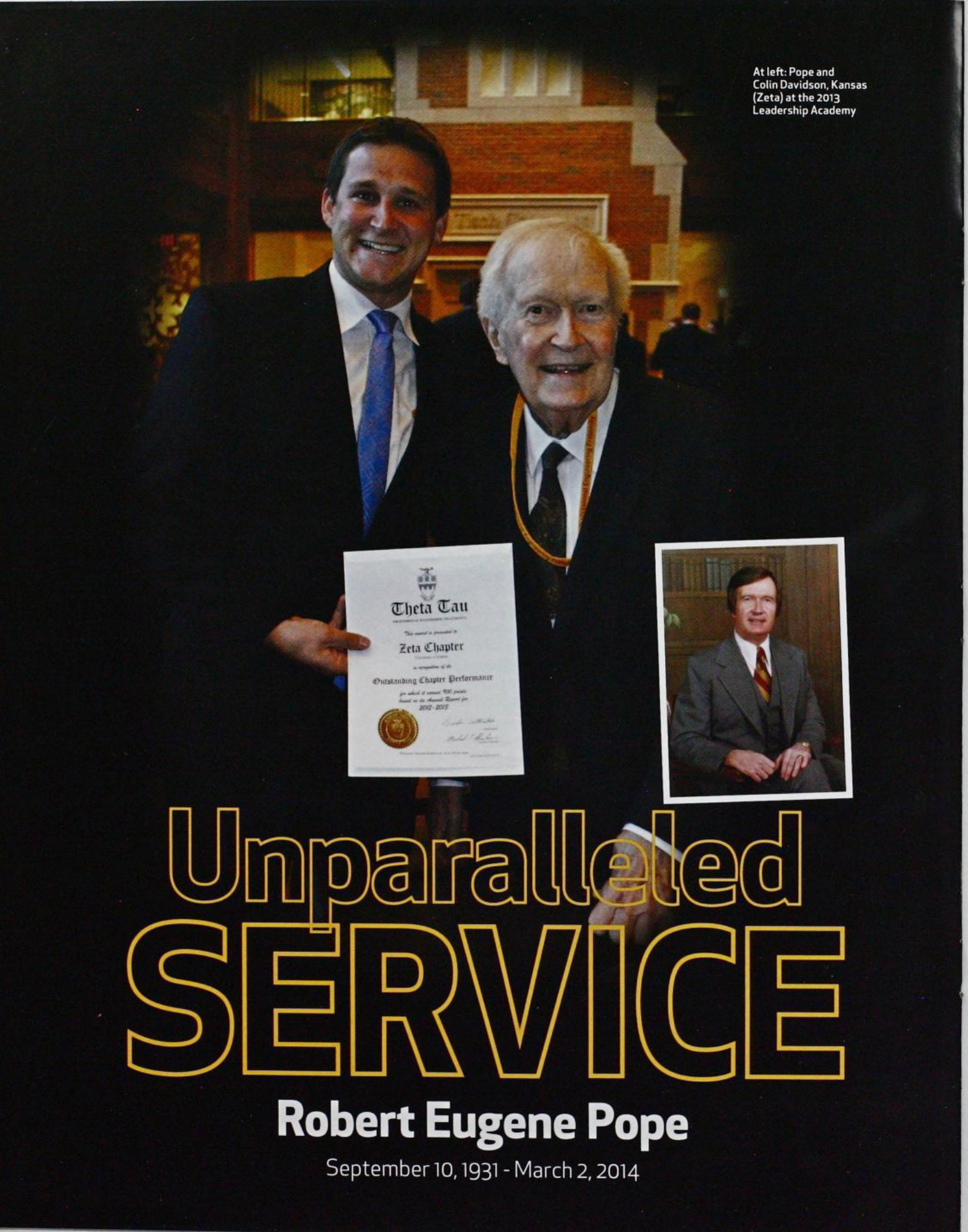
After the tour we struck up a conversation and discussed our respective research projects. I found out that he was only staying at CERN for a couple of days and that he was looking for future steps in his own particle research.

After talking for nearly an hour, Professor Mikado shared with me that despite all of the incredible work and discoveries by CERN, his greatest disappointment is that very few people know what they have accomplished and even fewer people understand CERN's accomplishments. He felt that many of the people who work there, and even the overarching organization as a whole, have trouble explaining what they do to others. A lot of people, if they even know what CERN is in the first place, only know a little about the LHC and even less about what CERN has accomplished or hopes to accomplish. At the end of our conversation, Professor Mikado issued a challenge to me: develop your communication skills and present your work in a way that people can understand it!

I did not think much of his words at the time, but after our conversation, I realized just how true his concern was. So many scientists and engineers accomplish fantastic things, but they are unable to tell non-engineers, and in many cases even other engineers, in a comprehensible manner what they have accomplished or what they are doing. It's truly tragic that such a "miscommunication" can hinder the education process and cause incredible projects to go unnoticed and as a result, unfunded due to a lack of comprehension.

The open motto of Theta Tau is "Whatsover thy hand findeth to do, do it with thy might." With all due respect, I think something needs to be added to our motto: "Whatsover thy hand findeth to do, do it with thy might and tell others about it!" There are so many spectacular things that engineers and scientists accomplish and we, as engineers and scientists of Theta Tau, should continuously work on improving communication skills so we can effectively share our works with others in the community. ⊗

We, as engineers and scientists of Theta Tau, should continuously work on improving communication skills so we can effectively share our works with others.



At left: Pope and Colin Davidson, Kansas (Zeta) at the 2013 Leadership Academy

Unparalleled SERVICE

Robert Eugene Pope

September 10, 1931 - March 2, 2014

Brother Bob Pope's service to Theta Tau and the Theta Tau Educational Foundation was unparalleled in our history. He was initiated into Theta Tau on October 1, 1950, and quickly became an integral part of his chapter and then the national fraternity. To honor him, the current and past Grand Regents share their memories of Bob.

Robert Eugene Pope was born in Wellington, Kansas, September 10, 1931, the only child of Opal I. and Samuel E. Pope. Bob always considered them to be the finest parents in the world, providing him with all the love, support and encouragement he could imagine. He received the degree Bachelor of Science in Chemical Engineering with Senior Honors from the University of Kansas in 1952, and later the degree Master of Science from KU.

He worked in the Control Lab of Monsanto during the summer of 1952, and then returned to graduate school at the University of Kansas where he was assistant instructor, 1952-56. First licensed as a professional engineer in 1953, he maintained that registration for 55 years. He was employed as a project engineer with Mallinckrodt, Inc., 1953-59.

Pope and other graduating Zeta Chapter members.

As an undergraduate, Bob had been initiated into Theta Tau, the oldest and largest engineering fraternity. In 1954 he represented Zeta Chapter at the national convention and was named Outstanding Delegate. He was employed by the fraternity as Traveling Secretary in 1959, as Executive Secretary, 1963-1984, and as Executive Director from 1984 until his retirement in 1996 when he was granted the title Executive Director Emeritus. In the 17 years between assuming the position of Traveling Secretary and 1976, eight chapters were installed—the first major growth in many years. Also three other major changes significantly affected the fraternity during the time in which Bob was involved: (1) establishing the position of Student Member on the Executive Council, (2) starting the first Theta Tau colonies, and (3) changing the Constitution to permit women to be members. He served on the board of directors of its magazine *The Gear of Theta Tau* beginning in 1993, and as Editor-in-Chief, 1996-2001. He was inducted into the Theta Tau Alumni Hall of Fame in 1988. He attended every convention from 1952 until about 2006, and the 1976 and 1996 national conventions honored Bob by naming them each the Robert E. Pope Convention. He last attended the 2013 Leadership Academy in St. Louis.

Bob also served the Professional Fraternity Association as Executive Secretary, 1977-1986, and received the Distinguished Service Award in 1995. He was a charter member of the Professional Fraternity Executives Association and a life member of the American Society of Associations Executives.

Bob was extremely grateful for all those whose friendship enriched his life. For decades, Bob enjoyed his close and dear friendship with Margaret Estes. Dennis Mann and Bob shared a home 1970-1977. He would later recall these as the best years of his life. From workout partners to best friends, they became brothers by choice. In 1972, Dennis and Bob developed the old-time professional strong man act called "The Iron Men" which performed for the next twelve years (as their spare time would permit) at venues across the nation, including Six Flags St. Louis. On TV, the act appeared three times on the Regis Philbin show, twice on the Mike Douglas Show, and established a world record appearing on the TV show The Guinness Game. During its final years of performing, Bob and his long-time friend Carl Rogers often performed the two-man act together.

Bob was laid to rest beside his beloved parents in Wichita Park Cemetery in Wichita, Kan.

POPE SNAPSHOT

- He was employed by the fraternity as Traveling Secretary in 1959, as Executive Secretary, 1963-1984, and as Executive Director from 1984 until his retirement in 1996 when he was granted the title Executive Director Emeritus. His long service earned him the nickname "Mr. Theta Tau."
- He much enjoyed family and class reunions and tried never to miss one. He attended every Theta Tau national convention from 1952 until about 2006, and the 1976 and 1996 national conventions honored Bob by naming them each the Robert E. Pope Convention.
- He was a fan of World's Fairs and had visited each one held in North America and two in Europe since 1964.
- He considered his greatest assets to be his ability to smile and to be kind to others, and his ability to prepare an above-average oral or written presentation. Bob would often relay the following story by Reverend Dr. Roy Angel at national fraternity events:
- One afternoon a man came out of his office and approached his new car to find a poor little boy, a street urchin, walking around the car, touching and staring at it in admiration. The little fellow looked up and asked him what a car like that cost. The man replied that he didn't know because his brother gave it to him. For a little while the boy appeared lost in thought. Finally he said "Gee mister, I wish…", the man knew he was going to say he wished he had a brother that would give him a car. But the man, being a good communicator, didn't interrupt the boy and listened. What the boy said was "Gee mister, I wish I could be a brother like that!"
- Bob was grateful to have experienced employment in academia, industry and entertainment as well as the non-profit sector, and he considered his long employment by Theta Tau to be the best job in the world for him.

Rooming with the Pope

I went to the national convention in Scottsdale, Ariz., in 2000 as a young alumnus, a couple of years out of school. Not being an officer yet at that time, I just thought it would be a fun mini-vacation to see some of the people from my chapter (Alabama) and maybe catch up with a few other chapters I knew as a student. Since Mu Chapter's student members already had a full room, I noted on my registration that I needed a roommate.

When I got to the hotel and checked in at the front desk, they said my roommate had already arrived. "Umm, it's a ... Pope?" the lady said. I thought about it for a minute and thought that surely she didn't mean Mr. Theta Tau, Executive Director Emeritus Robert E. Pope. "Pope?" I asked.

"Yes, that's right."

I got my key and proceeded to the room. Sure enough, Bob Pope was there in my room! I had met Bob a time or two at previous national events in passing. He had retired while I was still a student, and I had never known him well. I was not prepared for the incredible welcome I got walking into that hotel room. "Hello! Brandon!! Come in! How are you! ?" I can still hear the enthusiasm in Bob's voice when I think about it.

It was like we were old friends, and it was the most genuine, brotherly welcome I have ever received. He wanted to know everything about how my trip was, how my job was, how Mu Chapter was. Everything. I was utterly amazed that someone who had been out of school for nearly 50 years at that point still had so much energy and enthusiasm.

Spending that weekend with Bob and seeing him around the students and alumni, I could see that he was truly excited to talk to everyone. His face lit up with the biggest smile with each and every conversation, and he had people laughing and smiling in no time. It was truly a joy and an honor to spend time with him.

I don't think it was possible to be in the room with Bob without having a smile on your face, and we're all lucky to have had a brother like that in our lives.

— BRANDON SATTERWHITE
Alabama (Mu) '98,
Grand Regent

Below: Theta Tau brothers at Pope's funeral

Pope and undergraduates at the 2005 Leadership Academy.

"I'd just hit Brother Pope with a roll of toilet paper!"

I remember that within two minutes of meeting Brother Pope, he made you feel like the most important person in the room. I remember sharing a room with him at a national convention. And I remember the time when some of my Omega Chapter brothers and I were visiting Sigma Chapter in Ohio. As a game, we were throwing a toilet paper roll at one another. Two brothers were walking by, and I threw the roll at one of them. He ducked, and the roll hit the person behind him.

I'd just hit Brother Pope with a roll of toilet paper. I was mortified.

Brother Pope picked up the roll and walked towards me. He calmly held out the roll and said, "I think this is yours."

He was one of the kindest men I'd ever met, and I'll remember him always.

— GLEN WILCOX
South Dakota School of Mines & Technology (Omega) '90, Alumni Hall of Fame Director and Past Grand Regent

(L to R): John Dealy, Bob Pope, Robert Macamish and their dates at the 1956 Zeta Chapter Christmas party.

Gracious Gentleman

When I think of service to Theta Tau, only two names remain above all others—Erich Schrader and Bob Pope. Bob dedicated his life to our fraternity and enrichment of our brothers, for which we are deeply indebted. I never had the privilege of meeting Founder Schrader, but I quickly affirm that my life has been richer through my friendship and shared experiences with Brother Pope.

When Theta Tau hired Bob as Traveling Secretary in 1959, he was going to be the one to perform extension and help chapters. I recognize that essentially all materials that we use today were Bob's ideas put into action. In addition, we continually added duties and consolidated our operations in a Central Office in his home for the next 25 years. Bob was always the one we could rely on. It is unimaginable what Theta Tau would be today if it were not for the constant devotion, continuity, and development of others that Bob provided over the years. Consider how many brothers have had the opportunity to grow and develop with the Theta Tau experience because he created or saved a chapter, or helped national or chapter officers to provide a better experience for our members. Bob officially retired as Executive Director in 1996, but became Executive Director Emeritus and stayed involved as Editor-in-Chief of *The Gear of Theta Tau*, as well as many other ad hoc assignments.

I learned a great deal from Bob through our interactions and by his example, like running the affairs of the fraternity. His understanding of our history and ability to work effectively with volunteers have been invaluable to me. However, the greatest of the personal aspects gained because of our affiliation are improved consideration of others, personal polish and how he always gave thanks to God. Bob was the most gracious gentleman that I have ever known.

We will miss you Bob, and your works do follow you.

— RANDALL SCHEETZ
Iowa (Omicron) '79
Past Grand Regent

Attention to Detail

Brother Bob Pope was a great man. I am glad that I got to know him and can count him as a friend. I first visited Bob's home (and the Theta Tau office) on June 16, 1976. He took me to visit the St. Louis Arch and showed me around town. We had a delightful dinner at a restaurant named Bentley's, and we went back to that restaurant several times when I visited him. I don't know if that was his favorite place to dine, but that's where we always went.

My dad met Bob when they were student members at the 1952 Convention. When I told my mom about Bob's passing, she said that he had taken time to show them around town during a trip there, and he took them to the arch. He had such a gift of hospitality.

When I was Grand Regent, we did not have the benefit of email and cheap telephone service. We wrote letters about all kinds of topics associated with operating our fraternity. I don't think I ever saw a letter from Bob that contained a typographical error or grammatical mistake. His attention to details was one of his greatest assets.

Bob always looked you straight in the eye and made you feel like you were the center of his attention. At conventions, everyone wanted to meet him since he was the face of the fraternity. He took the time to greet each and every one with the same level of enthusiasm. He was sharp-minded and had a wide sphere of influence. His devotion to our fraternity must have carried a price, but Bob gladly paid it.

— TOMMY BROWN
Alabama (Mu) '77
Past Grand Regent

Clockwise: Pope and his black 1964 Lincoln Continental with suicide doors; Pope, then Zeta Chapter Regent, giving a pledge pin to John Dealy, Kansas (Zeta) '58, in 1955; Pope and Marc Crotts, NC State (Rho) '53.

Feeling like the most important person in the room

I first met Bob Pope in 1990 at the national convention in Iowa City, Iowa, and I noticed Bob trying to meet as many brothers as he could and learn about them, including myself. He genuinely wanted to know about his brothers and their lives. In subsequent years, I would observe that Bob had a great talent in making the person he was talking to feel like the most important person in the room. It didn't matter if the person was a national officer, alumnus, student member, or guest, Bob would act as if that person was the only person in the room. There were always many people who wanted to meet and talk to Bob, and he made time for each of them.

I was fortunate to work on the Executive Council for a couple of years with Bob and was able to see firsthand the passion he had for Theta Tau. He always had a smile on his face and was excited to talk about the fraternity at any time. It was a privilege of mine to call Bob a friend, and I will miss seeing him at conventions.

— MIKE LIVINGSTON
George Washington (Gamma Beta) '92, Delegate-at-Large

Always Cheerful

Bob was finishing his M.S. degree in Chemical Engineering when I pledged Zeta Chapter in 1956, and our friendship began immediately. He had been Regent of Zeta Chapter for a year and was very influential in recruiting new members.

My relationship with Bob became stronger when I was Zeta Chapter's delegate to the 1958 national convention, which Bob attended as Grand Scribe. Bob was a groomsman at our wedding in 1960. A few months later, my wife and I were in Detroit for a job interview, and Theta Tau was having its convention at the same hotel at the same time. Bob suggested I stay for the convention, which I did, continuing my national Theta Tau activities. In 1962 I was asked to come to the convention but couldn't due to the cost. Bob convinced the national fraternity that I should come as the official photographer, and Theta Tau paid my transportation. This began my Theta Tau national career, which ended as Grand Regent from 1972 to 1976.

Bob has always been a very good friend of our family. We would travel through St. Louis on our way to visit relatives in Kansas and saw him many times over the years. During the past few years when Bob's health started to fail, I would telephone him every week or so to keep up his spirits and would report my conversations to a number of his Theta Tau friends. Even though his health was not good he always sounded cheerful and was sure that he would overcome his physical difficulties. His passing was quite sudden and unexpected.

Bob was a very thoughtful and caring person. He was always thinking of other people and how he could help them before he thought about himself. He will be missed.

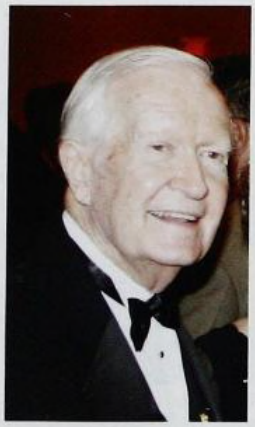
— GEORGE G. DODD
Kansas (Zeta) '60,
Past Grand Regent

Professional, Friendly

I will always remember Bob; not for the time I was on the Executive Council but for the first time I met him. It was in the spring of 1966 at Tennessee Tech where I was student. I was President of a group of engineering students that had formed an engineering fraternity and was in the process of interviewing national fraternities with the intention of becoming affiliated with one. At the time of meeting Bob, we had already interviewed two fraternities. Bob came to Tech and presented Theta Tau. His presentation of what Theta Tau represented was what we envisioned a professional fraternity should be. He was professional in his presentation, was friendly, and made you feel as if you had known him and Theta Tau forever. Following his departure, we held a short meeting and voted to petition Theta Tau for membership.

In 1970 I was elected Grand Outer Guard, and thus started 40-plus years of working with Bob. Bob maintained his professional approach and friendly manner over all those years. Bob is "Mr. Theta Tau" and will be deeply missed.

— STEPHEN J. BARTH
Tennessee Technological (Lambda Beta) '67,
Past Grand Regent



Far left: Pope and Stuart Culp, Kansas (Zeta) '56

Left: Pope at the 2006 National Convention

Below: Zeta Chapter members at the 22nd National Convention: Bob Franklin, '61; John Dealy, '58; George Dodd, '60; Pope, and Bill Franklin, '57.

For the good of our great fraternity

Robert E. Pope was the face of our national fraternity for the last half century. I first met Brother Pope at a national convention registration table, much the same as thousands of others had before that day in 1978 and since. While Bob grew up as an only child, he lived most of his life with many thousands of brothers, and no one reveled in that fact more than him.

At the 1982 Convention in Houston, Grand Regent Barth spoke of the need to invest in Theta Tau's future: to hire a brother who would focus on bringing Theta Tau to new campuses, to modernize the Central Office with a computer and to relocate it from Bob Pope's home to a professional office building. I felt as if the Grand Regent was speaking directly to me, and I jumped at the chance to follow in Bob Pope's footsteps and work for our fraternity after graduation before I started my professional career. So in May of 1983, I moved to St. Louis to work for Bob as the fraternity's Extension Director and chapter consultant.

My first task upon arrival was to move the Central Office from its cramped location in the spare bedroom of Bob's modest two-bedroom home in Creve Coeur, Mo., a suburb of St. Louis. We moved everything to the three-room space we had rented from Theta Xi's fraternity headquarters about a mile from Bob's home. Once the Central Office was moved from Bob's home, I remodeled the room it had occupied and moved in.

My next task was to set up the new computer Theta Tau had purchased, an NEC Advanced Personal Computer running an Intel 8086 CPU with two 8" floppy disks and a mammoth 10MB external hard disk. The system ran the CPM/86 operating system. I designed the membership database in dBase-II, and our three part-time secretaries spent the summer typing in our membership list from index cards in our card file—a truly daunting task!

In my years of service to Theta Tau, I worked for Bob on his staff, and he worked for me when I was Grand Regent, but as I think back on the various roles it seems to me that we both just worked for the good of our great fraternity and the titles we held had little meaning. Bob was a great leader and I learned by his example to also be a great follower. ⊗

— DEAN BETTINGER
Syracuse (Tau) '81,
Past Grand Regent

Mentor

by Justin Wiseman, Lawrence Technological (Xi Beta) '95

MENTORING CAN BE MUCH MORE THAN an experienced journeyman training an apprentice or a master training his protégé; it can be one taking the time to help, teach, motivate and support another. Or it can simply be one taking the time to listen and say nothing at all. Mentoring can be demonstrated by setting a good example, doing the right thing and being a role model.

Over the years I have had the privilege of interacting with new engineers in the workplace and with Theta Tau brothers inside and outside of the chapter. I have worked with high school students to show them science and technology can be fun. I have been able to teach my children to be self-sufficient, but still hold them when they need some support. It continues to be an honor and privilege to interact with others of all ages to model the way for them to follow and to encourage them to succeed.

Theta Tau can help young men and women better understand the art of communication and become more comfortable with interacting. It provides opportunities to work on teams and network with other Theta Taus to succeed. Call it mentoring, networking or coaching; Theta Tau places our members in situations where we are supportive and encouraging of others to push the limits, expand the boundaries, and to accept a helping hand when needed, but to also unselfishly offer one when necessary. These are some of the biggest benefits of membership in Theta Tau.

Who are those in your life that ignited the spark within you to become the adult you are today?

A very wise man, my father, would frustrate me to no end as I grew up. He would never directly answer my questions, but would ask what, why, where, when, who, and how. His questions would be phrased in such a way that they contained just enough information that would help me to realize the solution or understand why something failed. His approach forced me to think through problems and come up with solutions. We would discuss the situations so I would learn from them.

Who are those in your life that ignited the spark within you to become the adult you are today? Who inspired you to pursue science, engineering, or mathematics? Who is a mentor to you? Who do you mentor? I hope you are fortunate enough to have someone to help, support, listen to, talk with, encourage and motivate.

I encourage you to give back to Theta Tau as mentor; I have been fortunate to be a mentor within Theta Tau for nearly twenty years, which has offered me the opportunity to help others succeed and grow through truly rewarding experiences. I am often asked why I continue to volunteer my time for Theta Tau, FIRST Robotics, and now as a little league coach too. It is because I truly believe that you can't help others without helping yourself along the way. Simply put, it makes life more interesting, fulfilling and gratifying. ⊗

Rave at the Library!

The Lambda Gamma Chapter at Clemson Brings the Silence

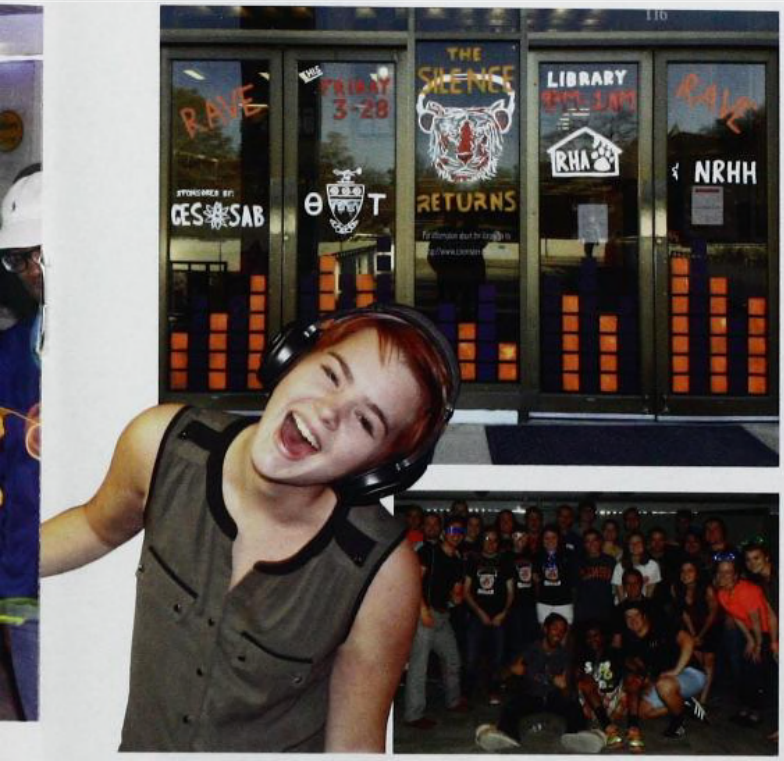
WHAT IS A SILENT DISCO?

The term comes from the first credited event in 1969 where a Finnish science fiction film called *A Time of Roses* hosted a dance party where wireless headphones were the sole source of music.

IF A TIGER ROARS IN THE JUNGLE but no one is around to hear it, does it make a sound? If a silent disco was held in a library, would it be EPIC? Only one way to find out!

What is a silent disco? The term comes from the first credited event in 1969 where a Finnish science fiction film called *A Time of Roses* hosted a dance party where wireless headphones were the sole source of music. The concept was also used by eco-activists in the early 90's who utilized headphones at outdoor parties to minimize noise pollution and disturbance to the local wildlife. Imagine hundreds of your closest friends dancing to their own music preference in a library. It's truly a customizable event. Want to talk to someone new? Want to talk to someone you know? No problem! Simply remove your headphones and enjoy a normal conversation. No more yelling over loud music—you can get to know each other in a party atmosphere without the noise. An ironic part of the entire silent rave is that it's truly not silent with students singing and tearing it up on the dance floor.

Last year, Clemson University's Lambda Gamma Chapter hosted its first silent disco, branded as *The Silence Begins* in March 2013 within a residence hall on Clemson's campus.



This year, our chapter joined forces with the Residence Hall Association to host *The Silence Returns* in Cooper Library on campus. Over 250 students descended the floors of Cooper Library and disrupted the silence that haunts the lower levels. Three live DJs streamed simultaneously to wireless headphones presented to each guest at the door. Participants were able to choose a station and jam with friends or rock out to their own beat. Our event worked with nationally renowned silent disco company, Silent Events, who has helped to host silent discos at many universities across the nation and even events as large as Bonnaroo and Van's Warped Tour.

The Silence Returns was a legacy brotherhood event and a part of Clemson history as the first-ever silent rave in the library. ⊗

WHO BROUGHT THE SILENCE?

David Parker, '13, **Silent Disco Co-Chair**

Taylor Schneider, '16 **Silent Disco Committee Member**

Carolyn Lennon, '14, **Regent**

Alexis Bertram, '14, **Risk Management Co-Chair**

Lambda Gamma Chapter would like to extend a thank you to Clemson's College of Engineering and Science Student Advisory Board, the National Residence Hall Honorary, Clemson's library administration, and the Residence Hall Association who helped make this event possible.

Hitting the Slopes

by C. Rebecca Woltz, Florida International (Omega Gamma) '16

Shortly after initiation into the Omega Gamma Chapter at Florida International University last fall, I drove back to my hometown in North Carolina to spend Christmas break with my family. While I was there, I planned a snowboarding trip to the Blue Ridge Mountains with a few of my friends from back home. After a semester of spending all day, every day (and a few long nights!) with my pledge brothers, I found that I could not be away from them without missing them, so I invited them to join.

I originally intended to invite just my pledge class because I was still a little shy about hanging out with the older brothers, but one of my pledge brothers suggested I extend the invitation to everyone in the chapter. As a new brother coming into the fraternity, I did not expect many brothers to be interested in making the long trip from Miami to North Carolina for an event that a newly initiated brother had created at the last minute. I was shocked when nine brothers came. They scrambled around trying to find ski jackets and warm clothes, which is not an easy thing to do in a city where most people do not even own a coat, and drove overnight for thirteen hours to meet my friends and me at the cabins we had reserved. One of my brothers even cut time with her family short to fly down from Connecticut to make the trip.

Most of the brothers had never been snowboarding or skiing—being from Miami, some of them had never even seen snow before, but everyone was enthusiastic and eager to learn. Some of us got the hang of it quickly and others had a few more falls, but we all had a great time. When we were not on the slopes, we spent time in the cabins, enjoying the beautiful mountain scenery overlooking the New River. We also tried in vain to start a fire in the fireplace (it is harder than it looks!), spent some time relaxing in the hot tub and played board games, which got pretty competitive!

It was a wonderful experience as a new brother to see what brotherhood is about. It was a great way to start off a lifetime of being a brother of the largest and foremost fraternity for engineers. ⊗

Promoting Renewable Resources

On March 15, 2014, Upsilon Chapter at the University of Arkansas was given the honor of participating in the annual St. Patrick's Day Parade hosted by the city of Fayetteville. Since St. Patrick is the patron saint of engineers, it seemed appropriate for us to participate. Fifteen members and three potential new members represented our organization and school. We chose to go with the St. Patrick's Day theme and "Keep Fayetteville Green" because our chapter is dedicated to maintaining a healthier environment. It was a fun way to encourage the community to recycle as well. We spent roughly three weeks working on the float, and almost all of our materials were recycled products. We used recycled soda cans and PVC pipe to make our rainbow. We were thankful for the opportunity to be involved with our community.

— Janna Alexander, Arkansas (Upsilon) '16

YEAR-LONG RECRUITMENT SUCCESS

Upsilon Gamma has been using its yearlong recruitment strategy with much success over the course of the past semester and the current. We recruited not just first-year students, but members from other organizations such as SHPE (Society of Hispanic Professional Engineers) and FES (Florida Engineering Society). We hosted a variety of events to bring people from all walks of life into our fraternity and pick the best of the best for our chapter. During traditional recruitment, we saw large attendance numbers and great enthusiasm from potential new members not only excited to join us, but to tell their friends about joining.

Our enthusiasm gave us energy to host events such as mixers with other organizations and days to spend time with our brothers—we were excited to grow the fraternity! Our excitement continued as we brought more than 20 brothers to the inaugural Gulf Coast Regional Conference, taking the prize for most miles traveled. We are extremely proud of what we have accomplished and look to the future to keep that stride of excellence.

— Javier de la Vega, South Florida (Upsilon Gamma) '15

Far left: Students at Texas A&M University finish their Rube Goldberg design. Above Left: Supplies used for Xi Gamma Rube Goldberg contest. Below left: Xi Gamma Chapter pledges working on their Rube Goldberg design. Bottom of page: Xi Gamma Regent, Holly Collins (left), and Rube Goldberg director, Lauren Phillips (right).

Texas A&M Hosts Innagural

Rube Goldberg Machine Contest

by Michele Breedlove, Texas A&M (Xi Gamma) '16

XI GAMMA CHAPTER AT Texas A&M University hosted its first annual Rube Goldberg Machine Contest on March 1. Kinder Morgan and Source IEC sponsored the event, and we partnered with SEC in their E-week events for advertising. We also hosted a "Minute to Win It" game where the object was to set up twenty dominos and ring a bell in a minute. This E-week game was similar to the Rube Goldberg contest in that the overall goal was to ring the bell. Through several advertising tactics such as E-week, posters around campus, social media and contacting local high schools, we recruited eight teams for the Rube Goldberg Machine Contest.

Of the eight teams competing, there were three high school teams and five college teams, each consisting of four to six members. A winning team was chosen from the high school group and one from the college group based on the judging rubric. The simple task of ringing the bell allowed the students to focus on imagination and difficulty of the machine. The judges looked at many different aspects of the overall machine including creativity, effectiveness and complexity. The most difficult part of planning the event was creating the judging criteria so that the teams were all judged fairly. Judges focused on the successfulness of the machine to complete the task, creativity, complexity, machine flow, the completion of the step list and meeting the time requirement. A step list was completed for each team that showed the judges what they planned to have happen step by step. The machines were required to run for 45 seconds to 2 minutes. Each team was given a bucket of useful objects such as army men, markers, rubber bands, a water bottle, plastic cups, balloons and construction paper, along with a bell, a two-by-four beam, and a 1 in. diameter PVC pipe.

The event was led by Lauren Phillips, Xi Gamma '16, and was considered a huge achievement for Texas A&M and Theta Tau. In the future, Xi Gamma plans on making this event an annual regional contest by inviting other Theta Tau chapters. ⊗

Judges focused on the successfulness of the machine to complete the task, creativity, complexity, machine flow, the completion of the step list and meeting the time requirement.

COLONY CERTIFICATIONS

» Colony

FLORIDA STATE

by Kegan Dellinger, '14

The gears to establish the Florida State University Colony were set in motion with a phone call between founders Kegan Dellinger (president) and Manuel Aguero. The driving reason behind founding a colony was to leave a stamp on the campus as a way to give back to the school. Florida State University held its certification ceremony on January 25, initiating 17 members, and has since initiated additional members.

The colony has participated in PanHellenic fundraisers, volunteered for multiple on-campus events, organized local brotherhood events and joined Omega Gamma Chapter (Florida International University) in a brotherhood event. The colony also participated in Florida State University's first E-week.

FLORIDA STATE

» Colony

EMBRY-RIDDLE AERONAUTICAL

by Jordan Savoy, '17, President

Eleven students at the Embry-Riddle Aeronautical University Prescott Campus became the founding brothers of one of Theta Tau's newest colonies on February 22, 2014. These students, all freshmen, had been working since July 2013 to meet the necessary requirements for both Embry-Riddle and Theta Tau. It was a challenging journey, and all of their hard work paid off. The Embry-Riddle students were joined by brothers from Arizona State University's Delta Gamma Chapter and ERAU's College of Engineering Dean of Students to celebrate the momentous occasion. Embry-Riddle's colony members have adopted Relay For Life as their service event and plan to host the inaugural event this October. The colony hopes to be installed as a chapter in the next year after they hold their first recruitment this fall.

EMBRY-RIDDLE AERONAUTICAL

» Colony

PURDUE, CALUMET

Purdue University Calumet was certified as a colony of Theta Tau Fraternity on Saturday, March 1, 2014. Grand Regent Brandon Satterwhite presided at the ceremony, and Colony Director Roy Daniels emceed the dinner, which was attended by Professor of Mechanical Engineering and Interim Department Head George Nnanna.

PURDUE, CALUMET

Chapter Installations


CALIFORNIA, RIVERSIDE

» Sigma Delta

CALIFORNIA, RIVERSIDE

by Humberto Scott Sanchez, '15

April 26 will hold a special place in all of our hearts. Not because we are now able to wear the badge, not because we have a reason to wear the Colony Member Pin, and not because we can finally stop calling ourselves the Theta Tau Colony at UCR. It is because we all worked so hard to make that day possible. From our inception to the chapter installation there have been 56 engineering students whose lives have been impacted due to the joining the colony. April 26 holds a special place in our hearts because of all the work that made it possible and all the opportunities we provided for future generations.

It is hard to imagine that less than two years ago, 21 students from various disciplines of engineering came together to form the Theta Tau Colony at the University of California, Riverside. Initially started by Dante O'Hara, it soon gained momentum in the Bourns College of Engineering when he joined forces with Vinci Sevilla Jr. and Shrina Kurani to form the first fraternity exclusively for engineers at UCR.

In January 2012 Michael Abraham had his first meeting with this interest group that included the aforementioned names as well as many of the 21 founders; they discussed what it means to become a colony. In May of that year the colony was officially certified.

For the next two years the colony would grow from the original 21 to its now 56 members, each one of us working to help each grow as professionals of the highest standard and uniting as a fellowship with the strongest bonds. During those years one thing was always on our minds: chapter installation. However, in order to achieve that goal we had to show that we could function as well as any other chapter. We gave back to community with street cleanups on University Avenue, Relay-for-Life booths on campus, and Engineering-Week tables showing future generations the wonders of engineering. We honed our professionalism through monthly workshops, company tours, and an aura of professionalism. We came together as a brotherhood through quarterly retreats, intramural teams, and always being there for each through thick or thin. Eventually we heard back from the Central Office—the time had come to start preparations. We filled out the planning form, told alumni about the event and planned for the arrival of the executive council.

When the day finally came we were ecstatic. This was a new chapter in our lives. The things being said were old and those of us that were there they seemed very new. Our founding brothers were happy to have started the colony and to see it become Sigma Delta Chapter. For the student members it meant that from now on they were operating at an official level, with all the rights and responsibilities that entails. Later in the evening we had a banquet where we were able to thank everyone who helped us reach this milestone. Speeches summed up everyone's feelings, pictures were taken, and they all say one thing: we are members of Theta Tau. We are Sigma Delta Chapter.

» Rho Delta

NEVADA, RENO

Luis Cupas, '15, Corresponding Secretary

On November 9, 2013, the University of Nevada, Reno Colony was installed as the Rho Delta Chapter of Theta Tau. Since it first became a colony in December 2011, the group has initiated over 60 members, all of whom have contributed greatly to the success of the Chapter. Rho Delta Chapter has developed a widespread presence on campus and become an influential part of the College of Engineering, having a big role in the annual "Engineer's Week", where the chapter has been hosting the annual Rube Goldberg competition ever since it was established as a colony.

The brothers of Rho Delta have begun many annual traditions such as an alumni banquet and year-end camping trip. Rho Delta has also organized many community service events, like the "5K Mustache Run" in benefit of the American Cancer Society, and fundraising events, like the "Funnel Cake Sale" on campus. The brothers of Rho Delta would like to thank everyone who came to their installation and for welcoming them to Theta Tau! ⊗


NEVADA, RENO

Gearing Up Young Minds

by Miguel López,
California, Merced (Mu Delta) '16

UNDER THE LEADERSHIP OF Brother Sovanarry Phy, '15, and Brother Erik Lau, '14, Mu Delta Chapter hosted the annual Theta Tau Engineering Competition (TTEC) this past fall semester. TTEC originally started in 2011 as part of a pledge project, and the goal of the competition is to display and teach core engineering skills, concepts and techniques.

This year's competitors were sixth graders. They were welcomed on a chilly Saturday morning by our brothers. The competitors participated in three activities: the balsa wood glider, the egg drop, and the pasta bridge challenge. We were happy to have the support of local businesses, which helped advertise TTEC throughout the community, the participants' teachers, who offered additional guidance and motivation, and finally from Dr. Daniel Hirleman, UC Merced's Dean of Engineering, who talked about his life experiences and the challenges presented in the field of engineering.

As always, this event provided brothers with the opportunity to bond while serving the community, promoting engineering and having fun.

Every brother from the Mu Delta Chapter including some our esteemed alumni were present to help set up, facilitate, motivate, judge, cheer on and clean up after every activity. We had brothers representing their respective fields of study, which included mechanical engineering, bioengineering, environmental engineering, material science and engineering, and computer science and engineering. Finally, our brothers had a chance to share a little about themselves, why they chose their major and their favorite parts about engineering.

There is no doubt that TTEC was a success! The support from the teachers present was exciting and highly appreciated. They were encouraging, advising, explaining and supporting the students every inch of the way, from the classroom door to the competition field. In addition, one of the teachers approached two of our brothers to express his excitement about the competition and to offer his assistance for future events.

One of our greatest rewards was seeing the kids excited about engineering. From the moment they arrived to the moment they departed, their excitement and curiosity never left their faces. A couple of days after the event while having lunch at a local food spot, Brother Erik Lau was approached by a high school student wondering when the next TTEC would be hosted.

We are happy to make an impact on the lives of our participants by helping them explore and consider the path of engineering. Furthermore, the letters and brothers of Theta Tau are being recognized for this positive movement within our community, and we do not plan on slowing down! ⊗

MARIA BRIONES: A Quest for Clean Water

by Chris Barrett

THE UNITED NATIONS SAYS MORE people die annually from contaminated water than war. Polluted water is one of the leading causes of death for children and is wreaking irreversible harm to our world's ecosystem. University of Rhode Island civil and environmental engineering student Maria Briones ('14) finds that simply unacceptable.

"It's heartbreaking to me to know there are people that don't have necessities such as toilets," Briones says. "I think it's a basic human right to have access to proper sanitation and clean water."

The energetic 22-year-old from East Providence, R.I., has soaked up as much experience as possible in hopes of reducing deaths attributed to polluted water.

In 2011, she traveled to Guatemala with the URI chapter of Engineers for a Sustainable World to assist a rural village with developing sanitation infrastructure. Briones assists civil and environmental engineering Assistant Professor Vinka Oyanedel-Craver with clean water research projects and interned with the R.I. Department of Transportation environmental division. She joined the Spanish International Engineering Program to gain the engineering and language skills necessary to work in Spanish-speaking regions, many of which suffer from severe water issues. Upon graduating in May 2014, Briones plans to join the Peace Corps while simultaneously pursuing a master's in environmental engineering.

"Maria's determination to use her engineering skills to make this world a better place is truly inspirational," Oyanedel-Craver says. "When she traveled with me to Guatemala she not only performed engineering work but also prepared civil engineering lessons for local high school students. Students in the community still remember that activity."

For Briones, the quest to deliver clean water is personal. Her family immigrated to the United States from Ecuador when she was a baby. Although Briones has known only a lifestyle where toilets always flush and clean water always flows from the tap, she frequently thinks of her extended family in South America who views such plumbing as luxuries.

"That could have been me," Briones says.

Her family also lacks access to the educational opportunities available to Briones, who will become just the second member of her family to graduate college. It's one reason Briones has pushed herself to excel in every fashion. During her academic career, she routinely took challenging course loads. Sher served as the first woman regent of Sigma Gamma Chapter. She was a resident academic mentor in the Engineering Living Learning Community and serves as an ambassador to foreign exchange students.

"We invest so much in education we have to make the most of it," she says. "I find it silly when people don't take every opportunity to make something of themselves because this is a perfect time."

The opportunities for Briones have extended beyond the Kingston Campus. Through the IEP, Briones spent a year in Spain, studying at the University of Cantabria and then interning at the Center of Studies and Technical Research in Gipuzkoa. At both places, Briones spoke solely in Spanish, a language she never learned growing up despite her Ecuadorian roots. It challenged her, especially speaking rapidly about fluid dynamics in Spanish, but Briones viewed it as another opportunity. It's a philosophy Briones expects to carry with her wherever she goes.

"People should challenge themselves," she says. "Sometimes they will fail, but if you prevail that's what sets you apart."

Reprinted with permission from University of Rhode Island College of Engineering

Maria Briones, University of Rhode Island (Sigma Gamma), '14, in San Juan De Gaztelugatxe, Spain.

The United Nations says more people die annually from contaminated water than war.

U.S. Diplomat Alumnus Retires

William Harold (Hal) Grigsby, Tennessee Technological (Lambda Beta) '73, retires after 44 years of federal service

IN A RETIREMENT CEREMONY AT THE HEADQUARTERS of the U.S. Department of State in Washington on January 28, Secretary of State John F. Kerry recognized the 44 years of federal service of William Harold "Hal" Grigsby and his 13 years of service as a U.S. diplomat after 31 years at the Federal Communications Commission.

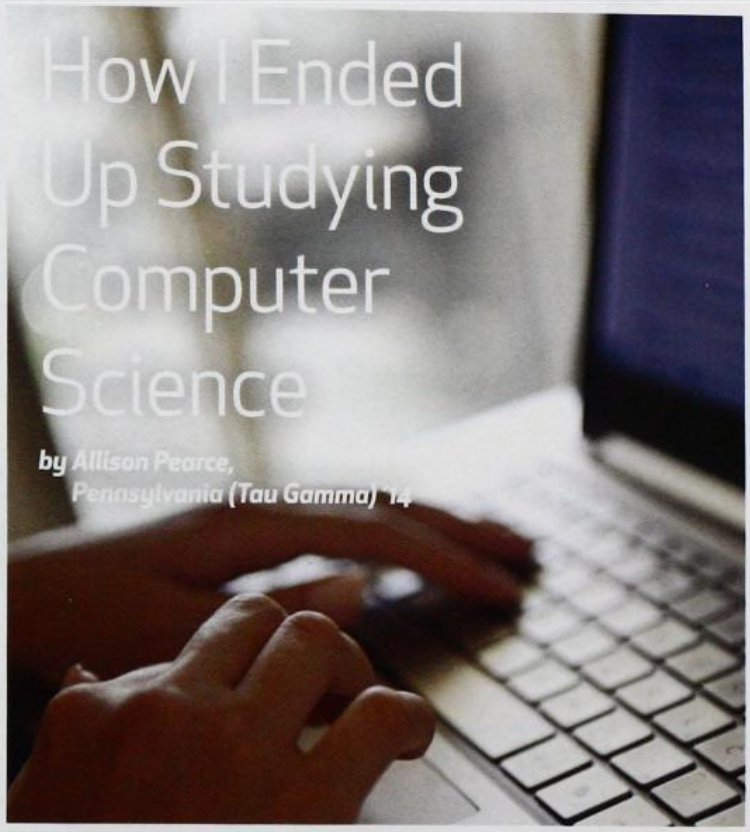
The ceremony involved approximately 200 State Department retirees. In it, Secretary Kerry mentioned that as the State Department's Director of Telecommunications Policy for Mexico and Micronesia, Grigsby had successfully led the negotiations of almost a dozen international telecommunications agreements. Secretary Kerry congratulated Grigsby on his retirement and thanked him for his service to the United States.

Secretary Kerry had earlier issued a U.S. Department of State Lifetime Achievement Award to Grigsby for leading negotiations of U.S. telecommunications agreements. These included the implementation of important networks supporting cross border public safety and law enforcement communications along the U.S.-Mexican border. Another was in an undersea fiber optic cable network extending broadband connectivity from the U.S. territory at Guam to a U.S. military garrison in the Marshall Islands and to the capitals of two island countries in the Western Pacific.

In addition to graduating from Loretto High School in 1966, Grigsby received a bachelor's degree in electrical engineering from Tennessee Technological University, Cookeville, Tenn., in 1973 and became a university certified translator in Spanish-English at San Diego State University in 1998. Grigsby served in the Federal Communications Commission, first as an engineering intern from 1967 to 1973, then as an FCC agent from 1973 to 1978,

Secretary Kerry had earlier issued a U.S. Department of State Lifetime Achievement Award to Grigsby for leading negotiations of U.S. telecommunications agreements.

as an FCC office director from 1978 to 1998 and as the Assistant Regional Director for Mexican Affairs in 1998 and 1999. His postings were in Washington; Atlanta; Long Beach, and San Diego, Calif. Grigsby also served as an officer in the U.S. Army Reserve from 1973 to 1989. Grigsby is the son of Ms. Mary Frances Grigsby of Lawrenceburg, Tenn. and the late Clifton Earl Grigsby of Saint Joseph, Tenn., and is also the brother of Steve Grigsby of Henryville, Tenn., Mac Grigsby of Saint Joseph, Tenn. and Beth Ruchti of Dade City, Fla. ⊗



How I Ended Up Studying Computer Science

by Allison Pearce, Pennsylvania (Tau Gamma) '14

I REALLY HAD NO IDEA WHAT I wanted to study when I was in high school. I was a pretty well rounded student, and I liked English class as much as math or physics. During my junior year of high school, my dad suggested engineering, but I didn't have a clear idea of what engineering was. I had heard of engineers working on trains and engineers making things out of plastic, but I didn't see the connection. So he sent me off to engineering camp, where I spent nine days having fun with projects, classes and sleep deprivation intended to demonstrate what it would be like to study engineering in college. The most interesting project was about a roller coaster.

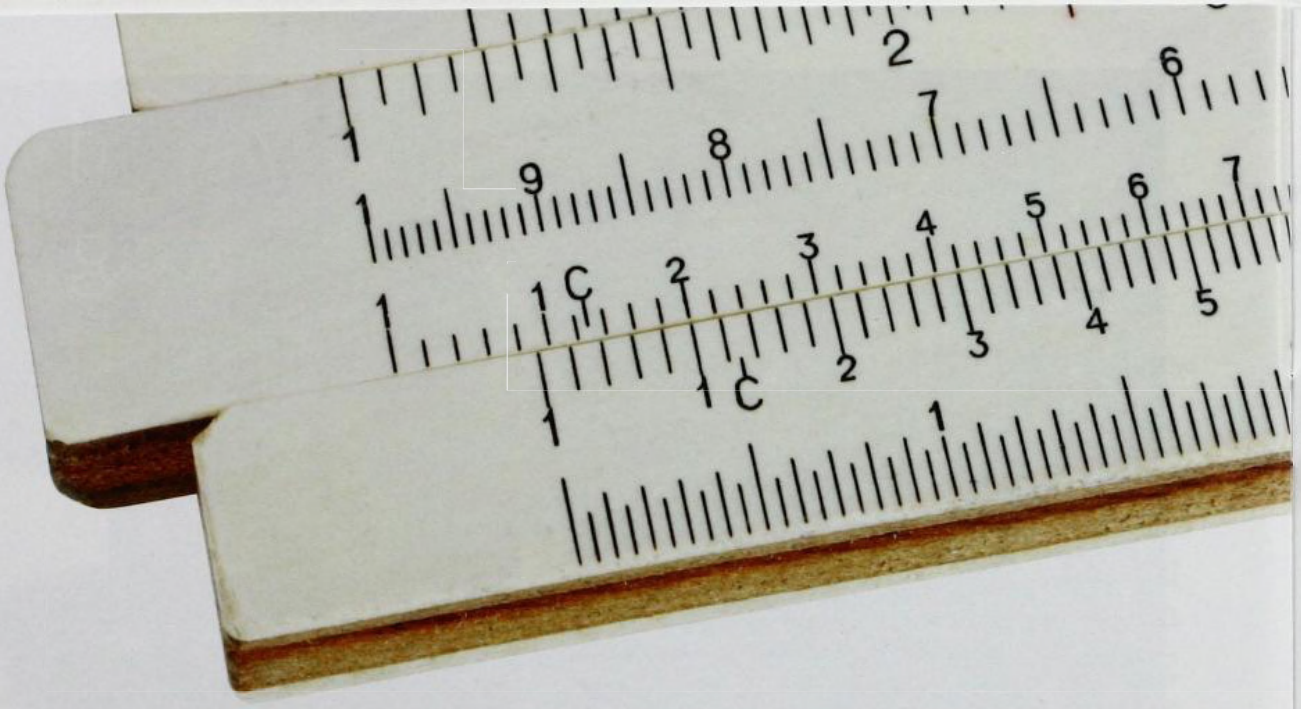
We were charged with building a "roller coaster" on which a marble could roll using nothing but Popsicle sticks and a glue gun, and I was working with my team to make a vertical loop — a feat that would win extra points in the evaluation. Popsicle sticks just aren't bendy. They're not loopable things. And then I saw the glue sticks that came with the glue gun. Using my hair straightener, I ironed them together until we had a material that could form a loop. I was really excited about my glue stick idea, and that's when it hit me that engineering is all about problem solving, which was what I wanted to do.

The computer science part came later. I started my freshman year at Penn as a bioengineering major, and I took a computer science class just to see what it was like. It was the first time I had ever programmed in my life, and I loved it. The following semester, I took another computer science class, and I weaseled my way into a bioengineering lab to do an independent study research project. I don't think I would have gotten the job without that little bit of coding experience from the first semester. My project involved a lot of programming to analyze massive amounts of iEEG data from epilepsy patients. I was trying to identify morphological differences in high-frequency brain oscillations as a possible seizure biomarker. Dr. Litt and one of his PhD students, Drausin, advised me to consider changing my major to computer science. Bioengineering at Penn has a lot of breadth and little depth. A computer science degree would give me a better-defined skill set that could then be applied to anything, including bioengineering. I was hesitant at first, but I eventually decided that they were right. For a while I was still planning to double major in biology and computer science, but there was a point when I realized that I would rather dig really deeply into computers than use computers as a tool to solve problems in another field. I also remember being worried that I was going to hate all of the hardware-related classes, but those turned out to be my favorites.

To young girls interested in studying engineering and computer science, I say do it! Get started in computer science early so you don't have play catch up like me.

To young girls interested in studying engineering and computer science, I say do it! Get started in computer science early so you don't have play catch up like me. It was really intimidating for me early on in my computer science career because I felt like I had to compete with people who had started programming their own video games at age twelve. I don't mean to say that you can't start at any time, but the earlier you start, the easier it is.

I also didn't realize how many amazing opportunities there are for women in engineering, specifically computer science. For example, the Grace Hopper Convention brings women in computing from all over the country together for a weekend of talks and events, and tons of companies go there specifically to recruit women. As I've gotten older, Theta Tau has given me lots of opportunities to be a mentor, whether it's helping new chapter officers get adjusted, helping people with resumes and job interviews or helping someone with a coding problem, which is something I've really enjoyed. ⊗



A Wonderful and Fantastic Adventure

Reflections on a career in engineering *by Vaughn N. Anderson, Louisville (Delta Beta) '44*

I was not allowed to discuss this program with anyone, including my superiors. This program was very effective, and I was fortunate to be included in the special commendation from President Dwight D. Eisenhower.

TO THE YOUNG AND adventurous engineering students: your degree in engineering is a great start. Make the most of it as a foundation to build upon because there is so much more to do. An engineering career is a wonderful and fantastic adventure.

I graduated from the University of Louisville, Speed Scientific School, with a B.S. in chemical engineering in 1944 and with an M.S. in engineering in 1972. My experience at University of Louisville was exciting in every way. Under the educational tutelage of Dean R.C. Ernst, Dr. G.C. Williams, Dr. D.M. Bennett, Professor W.R. Barnes and many others, I managed a reasonable learning process in spite of too many extracurricular activities such as acting as President of Theta Tau Fraternity and Vice President of the University Inter-Fraternity Council, along with membership in various engineering societies such as the American Institute of Chemical Engineering.

An intervening broken leg from playing intramural soccer put much pressure on my academics, but with the support of fraternity brothers and other friends, with a special thanks to Thomas Sumner, I was able to continue with my studies.

I entered the U.S. Navy immediately following graduation and had an uneventful service due to the lateness of my tour in the Navy. I had some private business experience after being released from the Navy including a teaching position as head of the math department with an electronics school.

For the next thirty-plus years, I worked for the U.S. Air Force. My first position was as a research chemical scientist in the materials laboratory at Wright-Paterson Air Force Base, Dayton, Ohio. In that position I developed the equipment and procedures for a hydrolytic stability test of petroleum products that was adopted as an aeronautical standard by both the government and industry. I also did extensive research in the field of non-flammable hydraulic fluids and pioneered the development of simulated flammability gunfire tests. These gunfire tests were documented by high-speed cameras and provided to other research organizations, both domestic and foreign.

My next position was with the Air Force Logistics Command. My first assignment, as first engineer, was to work with top executive manager Ted Chalfant to formulate and establish an engineering mission and organization in the Command. Eventually, I presented this effort to Maj. Gen. Burnside and received approval to implement the program. This engineering program became one of the major elements of our Command, representing some 2,500 military and civilian professional engineering personnel with a multi-million dollar investment in engineering test laboratories and test facilities and a multi-

million dollar annual operating budget, and was managed by my headquarters office with a staff of 30 engineering personnel. For my leadership and management, I was recognized by the Secretary of the Air Force as the Air Force's Arthur S. Flemming Award nominee.

I also played a major role in the establishment of Site Activation Task Forces (SATAFs) during the ballistic missile crisis or "GAP" of the 1960s. In addition, engineering contributed to the accelerated strategic missile test programs and participated in missile test launches at Cape Canaveral, Fla., and Vandenberg AFB, Calif.

Subsequently, I was assigned and directed to manage a highly classified program in direct cooperation with the Atomic Energy Commission office in the Pentagon in Washington. I was not allowed to discuss this program with anyone, including my superiors. This program was very effective, and I was fortunate to be included in the special commendation from President Dwight D. Eisenhower.

Another program assignment was the special task to assess the impact of atomic weapons' radiological fallout effects on operational aircraft weapon systems and on logistics, which required participation in many tests conducted at both the Nevada and Pacific nuclear weapons test programs.

We conducted radiological measurements of aircraft that had flown through the cloud of atomic weapons (detonated from towers) to investigate the levels of contamination of the aircraft engines and pilot cockpits to determine the time and condition that would allow aircraft to turn around for another mission. Decontamination was vital for this purpose. As an example, we took a fighter aircraft that had flown through a cloud, then had a fire truck put a spray of water in the engine intake while running. Radiation readings were taken during this and other tests for later study and analysis.

I was at the Pacific Proving Ground and viewed the *one and only nuclear weapon air drop and detonation*. It was a sight of great indescribable beauty but one that I hope will *never* be seen again by anyone.

I presented the results of my study to four-star Cmdr. Rawlings and his staff. The data and conclusions of my report were well received. One of my conclusions was a complete overhaul in the policy of base defense operations, recognizing that we were covering completely new technology and concepts. Upon the conclusion of my presentation, the Commander directed that I present to all of the Command's field commanders and their staffs.

The next phase of my career as the Director of Engineering (Deputy when a military officer is assigned) was more day-to-day business. I had a staff of some thirty engineering personnel, including engineers in the fields of aeronautics, mechanical, electronic/electrical, materials and specialties (including aircraft structures, aircraft engines, ground and airborne radar, etc). We had eight engineering field organizations consisting of some 2,500 engineering personnel that accomplished most of the detailed and major engineering tasks. Our engineering business involved design, procurement, supply, and maintenance.

This is a brief overview of my 30 years of engineering activities. I am proud of my engineering career. It was an exciting, complex and wonderful experience, and I certainly learned a great deal in the process. ⊗

Catapulting University of Arizona Discoveries to the World

by Paul Tumarkin, Tech Launch Arizona

Tech Launch Arizona presented its first Catapult Awards on Monday, honoring those whose work is moving University of Arizona (UA) inventions into the marketplace.

Honors were given to individuals and teams in six categories. Four awards were given to UA faculty and researchers who have demonstrated excellence as inventors and effective Tech Launch Arizona partners. Two additional awards recognized contributions from community members outside the UA.

David Allen, vice president of Tech Launch Arizona, emceed the event and UA President Ann Weaver Hart offered comments and presented the awards.

"This is the creative manifestation of our land-grant mission at its best," Hart said, regarding the process of bringing inventions born of academic research to the public. "We are creating new knowledge right at the boundaries of the frontier and thinking about how that new knowledge will apply to our lives and to our futures."

UA alumnus Patrick Marcus [Chi '99], president of Marcus Engineering LLC, received the Catapult Award for Ecosystem Impact to recognize his work as a "community connector," bringing people together through a variety of efforts, including teaching children engineering, participating at the Arizona Center for Innovation and creating public art installations.

"It's these people's work that is directly changing the quality of life for people in Tucson, across Arizona and throughout the world through research, collaboration and innovation," Allen said. "They're doing more than commercializing products. They're starting new businesses, creating jobs and having a real economic impact on our city and our region."

Allen said Tech Launch Arizona plans to hold the Catapult Awards annually to highlight the work of entrepreneurial researchers and inspire others to engage in the process of commercializing their work.

"Doing the foundational scientific research that makes the UA great is essential. But then following an invention that arises out of that research through the entire process of commercialization? That takes a different kind of focus and hard work, and the people who do it successfully deserve our recognition."

President Ann Weaver Hart with Patrick Marcus (center), who received the Catapult Award for Ecosystem Impact, and TLA Vice President David Allen. Photo credit: Tech Launch Arizona

Who says engineers can't dance?

by Taryn Lorey, Clemson (Lambda Gamma) '16; and Kristen Carpenter, Clemson (Lambda Gamma) '15

ON MARCH 1, 2014, LAMBDA GAMMA Chapter at Clemson University danced for twelve straight hours in a dance marathon to benefit the Children's Miracle Network. We danced each hour for the children who may not ever stand, much less, dance.

The day was filled with games, a bouncy house, corn hole, crafts and, of course, lots of dancing. The fun activities kept our energy up throughout the night, and we never forgot why we were there. Each hour a family with a "miracle child" took the stage to share their story. All the families had spent time with their children at Greenville Children's Hospital, which was the recipient of all funds raised during the event. The outpouring of appreciation from these families for what we were doing was felt throughout the entire room. And the bravery, strength and inspiration of each family kept up our determination to keep dancing.

Each dance team danced for an individual Miracle Child. Lambda Gamma was honored to dance for a special kid named Abe Hopkins. Abe is the youngest of the four Hopkins children. He, along with his two oldest sisters, is disabled, each with an unrelated condition. Prior to Abe's birth, his parents discovered he would be born with clubfeet. Other than this, Abe had a normal birth; however, the night after he was born, he stopped breathing suddenly. Angel II (a special neonatal ICU) responded and took him to Children's Healthcare of Atlanta where he spent his first five weeks in the NICU. During these weeks, his family stayed in a Ronald McDonald house to be near him. Due

Our team had raised $3,235. This was the second largest amount of money raised by an individual team.

Opposite: Lambda Gamma's Dance Team at the beginning of the twelfth hour of the marathon; Below (clockwise), Kyle Brennan, Clemson (Lambda Gamma) '16, playing video games with a miracle child's brother; Annemarie Crumrine, Clemson (Lambda Gamma) '16, with a sponsored miracle child; Dance Marathon Team with their sponsored miracle child, Abe Hopkins, and his sister.

to the lack of the oxygen during that period, he experienced brain damage that causes him to have seizures and other issues. He returned home for a short three weeks before he was transported to Iowa City, Iowa, to have his clubfoot treatment. Unfortunately, he will never be able to use his corrected feet to walk.

The Hopkins family, along with other families, spoke of staying in the Ronald McDonald House while their children were undergoing treatment. The Ronald McDonald House gives families a place to stay so they can be with their children during stressful hospital stays. It prevents children from having to go through the pain of treatment and healing without the love and support of their families close by.

Throughout the semester, our brothers saved soda pop tabs, which we donated to the Ronald McDonald House charity. The House uses the funds from recycling the aluminum to help with the expenses. We started this project a year ago and have collected approximately 10,000 tabs so far. The families at dance marathon allowed us to see a glimpse of the benefit that our collections are going toward.

During the marathon, our team danced for Abe along with all of the other miracle children. Our team consisted of 13 student members and one alumnus, which made us one of the smallest teams at the event. However, due to an incredible amount of fundraising and donations, in less than a week, our team had raised $3,235. This was the second largest amount of money raised by an individual team, right behind the executive Dance Marathon team. In total, the event raised over $30,000 for Greenville Children's Hospital.

Though staying on your feet for 12 hours straight may seem exhausting, in the grand scheme of things, half of a day is a short span when compared to a lifetime of never being able to stand. This realization impacted the members of our team and brought us closer together as brothers. We cannot wait to participate in the event next year and hope to raise even more money for the children for whom we will proudly dance. ⊗

The day was filled with games, a bouncy house, corn hole, crafts and, of course, lots of dancing.

5Q+A

Rachel McFalls

Mississippi State (Kappa Beta) '14

South East Regional Director

1. What's the best place you've ever visited?

We went to Ireland for spring break my junior year in high school. It just so happened that we landed in Dublin at 5 a.m. on St. Patrick's Day. We had forgotten about the holiday and were surprised by the festivities. The whole trip was charmed, so my favorite travel would have to be Ireland.

2. What's your favorite Theta Tau memory?

My favorite Theta Tau memory happened on a Sunday night when some brothers came to visit from other chapters. They took Thor (our big hammer) to Mu Chapter. Of course, we had to get it back, so the whole chapter hopped in cars and drove to Tuscaloosa for reconnaissance! We swarmed the house, expecting them to put up a fight. They opened the door, and we all ran in. We bonded over getting our hammer back and all laughed about it once we got to University of Alabama.

3. What do you like to do for fun?

I am on the Xipiter student unmanned aerial systems (UAS) design team at MSU. We produce a new, all-composite aircraft every year named Xawk. I really enjoy hanging out with my brothers, building Xawk, playing with kittens, and playing ultimate frisbee in my free time.

4. If you were a super-hero, what would your superpower be?

If I have to choose from the regular super powers, of course, I want to fly. But, as time management is becoming an increasing concern in my life, I think unbounded instantaneous travel would be more helpful! Can you imagine blinking and being on the moon for lunch? Also, I would want to be able to bring one person with me in my teleportation.

5. Where do you see yourself in 20 years?

In 20 years I see myself at National Convention running for Grand Regent! I would be working at my own company as an aerospace defense contractor. We will win every contract because I have important information that no one else has access to because I can teleport. When do my powers come in? ⊗

Lee C. Haas

North Carolina State (Rho) '62

Passed away peacefully on December 13, 2013, following his long struggle with the effects of diabetes.

Haas' service to Theta Tau and the Theta Tau Educational Foundation spanned many decades even though he had joined the fraternity as a PhD student at North Carolina State University only in 1985. When Rho Chapter offered to make him an honorary member, his reply was, "No, I just want to be a regular member like you." With that, he commenced his pledgeship.

Brother Haas earned his BSEE from Virginia Polytechnic Institute and his MSEE from San Jose State University. He served as adviser to Rho Chapter, as a member and treasurer of the Rho Housing Corporation and in numerous other offices. He served the national organization as regional director, Grand Marshal, Grand Vice-Regent, Grand Regent and Delegate-at-Large. Haas worked to benefit the fraternity strategically and practically, having selected, installed, and set up the Central Office's first accounting software system.

In 1990, Haas and Bob Pope established the Outstanding Student Member program to honor a student member in each chapter. He also developed the values-based colony orientation workshop still used today with all new colonies. In 1998, Brother Haas worked with Mike Abraham to create the Theta Tau Educational Foundation, of which he served as president for many years. The charitable foundation has focused on providing leadership development and scholarships for Theta Tau student members, as envisioned at the time of its founding.

He presided at the installations of Eta Gamma, Theta Gamma, and Iota Gamma Chapters as well as numerous colony certifications. Brother Haas was inducted into the Alumni Hall of Fame for outstanding service to the fraternity and his profession in 2002. In 2007, his attendance at the Virginia Tech colony certification (his first alma mater) was a moment of delight. For many years, helping new Rho members make their hammers was a perennial joy.

Brother Haas was employed by IBM for many years until his retirement in 1995. He received several awards from IBM including the Fifth Plateau Invention Achievement Award. He held nine patents and authored numerous IBM Technical Disclosures. Haas was an avid traveler, snow skier, scuba diver, racquetball player and quintessential engineer. He is survived by his wife Brenda (who attended several National Conventions with Brother Haas), children, and grandchildren. They were all blessed to see Haas and Brenda celebrate their 50th wedding anniversary earlier last year.

All in Theta Tau who were privileged to be closely associated with him over the years personally feel a deep sense of loss as a result of his passing, but the memory of him will continue to inspire all Theta Taus to greater service to our fraternity and Educational Foundation.

Alabama (Mu)
Harry Leo Gogan, '48, Roll # 418
Roger Allen Peirce, '73, Roll # 975
Karl Frank Stark, '49, Roll # 429

Arkansas (Upsilon)
Earnest W. Fant, '63, Roll # 532
Malcolm Everett Ritchie, '69, Roll # 688
Alvin Chester Singer, '51, Roll # 368

Arizona (Chi)
Clark Henry Gerry, '49, Roll # 345
Waldo Issacson Rogers, '52, Roll # 415
Phillip Thomas Webb, '51, Roll # 395

Carnegie Mellon (Nu)
Andrew Joseph Pepper, '46, Roll # 412
Hugh Frederick Porter, '45, Roll # 445

Case Western (Delta)
Lee Eastman Gallaher, '51, Roll # 776
Edward George Prell, '53, Roll # 831
Denton Kenyon Swartwout, '40, Roll # 426

California, Berkeley (Epsilon)
Glenn Albert Wells, '58, Roll # 722
George Charles Wishart, '47, Roll # 576

Colorado Mines (Gamma)
Frederick Charles Aldrich, '48, Roll # 586
Warren Oliver Johnson, '49, Roll # 695

George Washington (Gamma Beta)
Gerald Keith Cornelius, '60, Roll # 401
Raymond Wright Juncal, '49, Roll # 228
Raymond Peter Morales, '65, Roll # 416

Iowa (Omicron)
Oden Francis Jester, '52, Roll # 407

Kansas (Zeta)
Thomas Edward Brune, '50, Roll # 522
Gernard Daniel Dean, '43, Roll # 452
Roger Kent Geery, '62, Roll # 621
George Wesley Holyfield, '54, Roll # 556
George Robert McNeish, '51, Roll # 516
Robert Eugene Pope, '52, Roll # 539
Bret Charles Squire, '03, Roll # 983

Louisville (Delta Beta)
Garnett Logan Wade, '52, Roll # 201

Minnesota (Alpha)
Edward Victor Mansfield, '46, Roll # 505

Michigan Tech (Beta)
Michael Alan Guenther, '82, Roll # 1154
Robert Warren Whitney, '46, Roll # 557

Mississippi State (Kappa Beta)
Joseph Edgar Holt, '74, Roll # 166

Missouri S&T (Iota)
George Verlan Bradshaw, '42, Roll # 413
Wayne Alan Hahne, '52, Roll # 629

Montana Tech (Psi)
Norman Julius King, '49, Roll # 239

North Carolina State (Rho)
Lee Clyde Haas, '62, Roll # 964

Ohio State (Sigma)
Fred Edward Besco, '57, Roll # 451

Purdue (Phi)
Wayne Kesler Milne, '38, Roll # 139
Robert George Squires, '57, Roll # 512
Donald Lee Steberl, '65, Roll # 376

South Dakota Tech (Omega)
Roy Ronald Appleby, '54, Roll # 398
Howard Chester Peterson, '50, Roll # 296

Syracuse (Tau)
William Cole, '45, Roll # 307
George Louis Luther, '56, Roll # 586

Toledo (Chi Beta)
Kimberly R Welch, '15, Roll # 305

Utah (Lambda)
John Royal Butler, '47, Roll # 550
Alton Harry Sorensen, '55, Roll # 660

Virginia (Pi)
Gilmer Cabell Brown, '50, Roll # 429
James Edward May, '42, Roll # 247

Virginia Tech (Psi Gamma)
Kevin McPhilips Tinley, '16, Roll # 138

Wisconsin (Xi)
Carman Myers Auble, '51, Roll # 116
Dwight Duncan Zeck, '65, Roll # 227

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