

Fall/Winter 2018

Shillelagh

For members of the Missouri S&T Order of the Golden Shillelagh

newsletter

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SHILLELAGH in CHICAGO!

Mark your calendar for OGS Weekend

JUNE 6–8, 2019

**Join OGS in the Windy City for a celebration
of Miner pride and Chicago's finest!**

Save the date and watch for an invitation with more details.

Questions? Contact **Sarah Jones** at
jonessarah@mst.edu or 573-341-6359.





Dear Friends,

This issue of the *Shillelagh* opens with a milestone: our October celebration to pour the cornerstone on the Clayco Advanced Construction and Materials Lab in Butler-Carlton Civil Engineering Hall. It was a banner day for the donors, alumni, faculty, students and special guests who joined us to launch construction on this \$6.5 million lab expansion, the final phase of a strategic initiative to advance S&T's leadership in infrastructure engineering.

A number of donors made it possible to pour the cornerstone on the new lab, and they are recognized on page 3. We are paving the way to a better future thanks to their support.

This issue also takes a journey down memory lane with some OGS members who have paused to share student memories, career highlights and why they choose to give back.

The three Miners in the Sieckhaus family share a professional bond and the same degree: a bachelor of science in civil engineering. As members of the Academy of Civil Engineers, **Bob Sieckhaus**, CE'63, and his sons, **Steve**, CE'87, MS EMgt'94, and **Tom**, CE'88, also share a commitment to making a difference. And as executives with Clayco Inc., our naming donor for the Advanced Construction and Materials Lab, Steve and Tom provided the momentum that made it possible to break ground on this major project.

Steve Frey, MS Phys'86, came to S&T as a graduate student and credits a Friday physics colloquium with sparking his future as a systems engineer. His connection to S&T has remained strong — and it deepened when his daughter, **Lydia**, ChE'14, decided to become a Miner as well. Now Steve and his wife, **Michelle**, have established a scholarship endowment for students in the College of Arts, Sciences, and Business.

Bill Brune, CSci'73, and his wife, **Carolyn**, have also chosen to make a difference through a scholarship endowment. Bill's memories of computer programming in the 1970s provide a sharp contrast to the world of information technology more than

four decades later. What really stands out, however, is Bill's passion for student design, in particular our Solar Car Design Team.

This issue shares headlines and highlights. It was great to see so many members on campus for our OGS Homecoming reception on Oct. 13 — and a pleasure to see four OGS members honored among the Miner Alumni Association's 2018 award winners: **Diane Butrus**, CSci'85, **David Heikkinen**, ME'93, **Dale Morse**, EE'79, and **Dennis Leitterman**, EE'76, MS EE'77.

More than 1,000 students came by Hasselmann Alumni House during the first week of classes to write thank you notes to their scholarship donors and smile for photos with Joe Miner. I hope the many OGS members who have provided endowed scholarships enjoyed those notes and photos from the grateful students you inspire.

It's not too early to start thinking about nominations for our 2021 Alumni of Influence celebration. You'll find a call for nominations and list of past honorees on page 10. We welcome your input on alumni you believe should be considered for the university's highest honor.

Please mark your calendars for June 6–8, 2019, and make plans to attend our "Shillelagh in Chicago!" OGS Weekend. We took Miner pride to the Mile High City for our 2017 OGS Weekend in Denver, and now we're headed to the Windy City. We'll share a full itinerary early in 2019, but you can already count on plenty of Chicago-style pizza.

With gratitude to each of you in this season of giving thanks,

Joan Nesbitt
Vice Chancellor for University Advancement



POURING THE CORNERSTONE ON A BETTER FUTURE

The donors who paved the way to a \$6.5 million lab expansion in Butler-Carlton Civil Engineering Hall gathered on Oct. 12 to pour the cornerstone on the Clayco Advanced Construction and Materials Laboratory.

The lab marks the final phase of a \$10.5 million initiative to advance S&T's leadership in infrastructure engineering. A U.S. Department of Transportation grant for \$2.5 million in testing equipment launched the first phase. The second phase added new faculty positions in civil, architectural, and environmental engineering and materials science and engineering. The final phase will add 16,000 square feet of research space to the existing high-bay structures lab.

"The lab will be one of the finest research centers in the world for construction



“Infrastructure is what sustains our quality of life, supports our economy and secures our nation.”

materials and methods,” said **Chris Maples**, interim chancellor. “It will position Missouri S&T for unprecedented acceleration in an area of leadership and expertise.”

The lab expansion received support from the University of Missouri System in June 2017 when President **Mun Y. Choi** committed \$1.6 million, identifying the project as a strategic investment for the entire system.

A bequest from **James Heidman**, CE’65, MS CE’66, was also instrumental to funding the lab, as well as faculty endowments in civil, architectural and environmental engineering.

In February 2018, ARCO Construction Co., its founders and S&T graduates employed there made a \$300,000 contribution to the lab — and held a special event in St. Louis to encourage other alumni in the construction industry to step up and support the lab. ARCO was co-founded by retired chairman **Dick Arnoldy**, CE’69, MS EMgt’73, and president and chief executive officer **Jeff Cook**, MS EMgt’94.

Two months later, Clayco Inc., one of the nation’s largest privately owned real estate and design-build firms, donated \$2 million, completing fundraising for the lab. The company employs a number of S&T alumni, including chief operating officer and shareholder **Steve Sieckhaus**, CE’87, MS EMgt’94, and executive vice president and shareholder **Tom Sieckhaus**, CE’88.

With the concrete dry and the cornerstone set, construction now begins on a lab that will pave the way to a stronger future.

“Infrastructure is what sustains our quality of life, supports our economy and secures our nation,” said **Joel Burken**, Curators’ Distinguished Professor and chair of civil, architectural and environmental engineering. “Thanks to the support of our generous donors, Missouri S&T is rising to the challenge of building a stronger, smarter, safer and more sustainable future.” ■

WITH APPRECIATION

Missouri S&T gratefully recognizes the donors to the Clayco Advanced Construction and Materials Laboratory and thanks them for their support.

- **Thomas Abernathy**, CE’52
- ARCO Construction Co.
- **Charles W. “Bill” Bennett**, ME’49
- Clayco Inc.
- Concrete Strategies
- **Randall Dreiling**, CE’81
- **Thomas Feger**, CE’69
- Geotechnology Inc.
- ***James A. Heidman**, CE’65, MS CE’66
- **Samuel Hutson**, EE’95
- McDonough Engineering
- **Jimmy Murray**, EMgt’76
- ***Paul Pender**
- **David Sheahan**, CE’74, MS CE’76
- Sunderland Foundation
- University of Missouri System and President **Mun Y. Choi**

**deceased*



1. Celebrating a banner day (left to right): **Bob Sieckhaus, Matt Coco, Joel Burken, Steve Sieckhaus, Tom Sieckhaus and Dick Arnoldy.**
2. A memento of the groundbreaking: desk-size cornerstones fabricated by S&T students.
3. A standing-room-only crowd gathers for the cornerstone pouring ceremony held in Butler-Carlton's high-bay structures lab.
4. Interim Chancellor **Chris Maples** thanks the donors to the lab on behalf of the entire university community.

5. Donors and guests gathered to raise a glass to the future of the ACML.
6. **Bob Sieckhaus** (left) and Civil, Architectural and Environmental Engineering Department Chair **Joel Burken** discuss plans for the new lab.
7. Students, alumni and guests enjoy a reception in the Butler-Carlton atrium following the groundbreaking.

Photo by George Bridges



PRIDE AND PASSION INSPIRE SCHOLARSHIP ENDOWMENT, STUDENT DESIGN LEADERSHIP

Bill Brune, CSci'73, remembers the days when computer programming involved feeding punch cards into a mainframe computer that filled an entire room.

"All of us from the 1970s remember waiting for jobs to run on the IBM 360 and getting the printouts back, only to find a typo on a punched card and doing it all over again," he says.

By the time Brune retired as lead program manager for Hewlett-Packard's Global Data Center Services, the dinosaur days of key punch had long been supplanted by the microprocessor. "In 1973 we were communicating at 1,200 bits per second (bps)," he says. "By 2015 I could connect to the Internet at 83 million bps per second."

Brune launched his career at Texas Instruments as a programmer in 1973 and went on to work for a number of companies including Price Waterhouse Coopers, El Paso Natural Gas and Hewlett-Packard. He holds an MBA from the University of Houston and was inducted into S&T's Academy of Computer Science in 2015.

Over four decades of IT leadership, Brune spearheaded everything from office automation to systems architecture. He also remained an involved S&T alumnus, serving on the Miner Alumni Association board of directors, recruiting prospective students as an admissions ambassador in the Houston area, and spending countless hours championing the Solar Car Design Team.

"Every time I'm with the team I'm impressed by their energy, creativity, knowledge and ability to collaborate," says Brune, who mentors the team, travels to competitions, and has even been known to assist the team cook. "I'm relieved I don't have to compete against them."

As a member of Miners by Design, a group of donors who support S&T's 20 student design teams, Brune is a passionate champion of hands-on learning.

"I think the most important change at S&T has been the addition of an experiential learning requirement for graduation," he says. "Real-world experience beyond the classroom builds well-rounded students."

This past year, Brune and his wife, **Carolyn**, established the William K. and Carolyn J. Brune Scholarship Endowment in support of undergraduates majoring in computer science and students who serve as team managers or leaders on student design teams.

"The education I received and friends I made shaped me as a person and prepared me for my career. I feel deeply about giving back," says Brune, who credits S&T alumni **Gary Havener**, Math'62, and **Jim Bertelsmeyer**, ChE'66, with inspiring the gift. "They both chose to see the results of their philanthropy sooner rather than later. Carolyn and I were inspired by that decision."

MAKING CIVIL ENGINEERING AND MINER PRIDE A FAMILY AFFAIR

For the Sieckhaus family, design-build is a way of life. As S&T civil engineering graduates and members of the Academy of Civil Engineers, Tom, Bob and Steve (left to right) share Miner roots and a passion for construction. Now they share a new point of pride: the Clayco Advanced Construction and Materials Lab.



Steve Sieckhaus, CE'87, MS EMgt'94, and **Tom Sieckhaus**, CE'88, are proof that if you grow up around a civil engineer, you're likely to be bitten by the construction bug. In their case, you're also likely to be smitten by Miner pride.

Their father, **Bob Sieckhaus**, CE'63, is responsible for both.

"I remember watching my Dad work most evenings at the kitchen table estimating projects," says Steve, chief operating officer and shareholder of Clayco Inc., one of the nation's largest privately owned real estate and design-build firms. "He took us on site visits. My passion for construction was fueled by those visits. I never considered anything but civil."

Tom, Clayco executive vice president and shareholder, also remembers the steel beams and hard hats of his childhood. "My father exposed me to industrial job sites growing up," he says. "I never really considered a different major. Dad was passionate about Rolla and pushed me hard in that direction."



Photo by August Jennewein

“Many of our construction professionals are civil engineers who graduated from Missouri S&T. We have benefited as a company from the great education the university provides.”

The Sieckhaus family has traveled Interstate 44 between St. Louis and Rolla ever since Bob landed at Fort Leonard Wood as a 17-year-old Army recruit.

“I was quartered with a bunch of college graduates who were civil engineers,” he says. “They took me under their wing. After that, I pretty well knew I wanted to be a civil engineer. Logging many miles on old Route 66, I always noticed the Missouri School of Mines signs in Rolla. I took this as a sign that was where I needed to be.”

As Rolla undergraduates, the Sieckhauses were active in fraternities: Bob in Pi Kappa Alpha, Tom in Phi Kappa Theta and Steve in Kappa Sigma.

“My fondest memory of Rolla is belonging to my fraternity,” says Bob, whose sons

have echoed the sentiment. “My family and I just got back from our 22nd annual vacation with several fraternity brothers and their families,” says Steve, and Tom also maintains longstanding ties. “I still stay in contact with several Phi Kap brothers and see many others in my day-to-day work.”

All three Sieckhauses went on to graduate school: Bob holds an MBA from Saint Louis University, Tom an MBA from the University of Missouri-St. Louis, and Steve a master’s degree in engineering management from S&T. Today they also share common ground as members of the Academy of Civil Engineers.

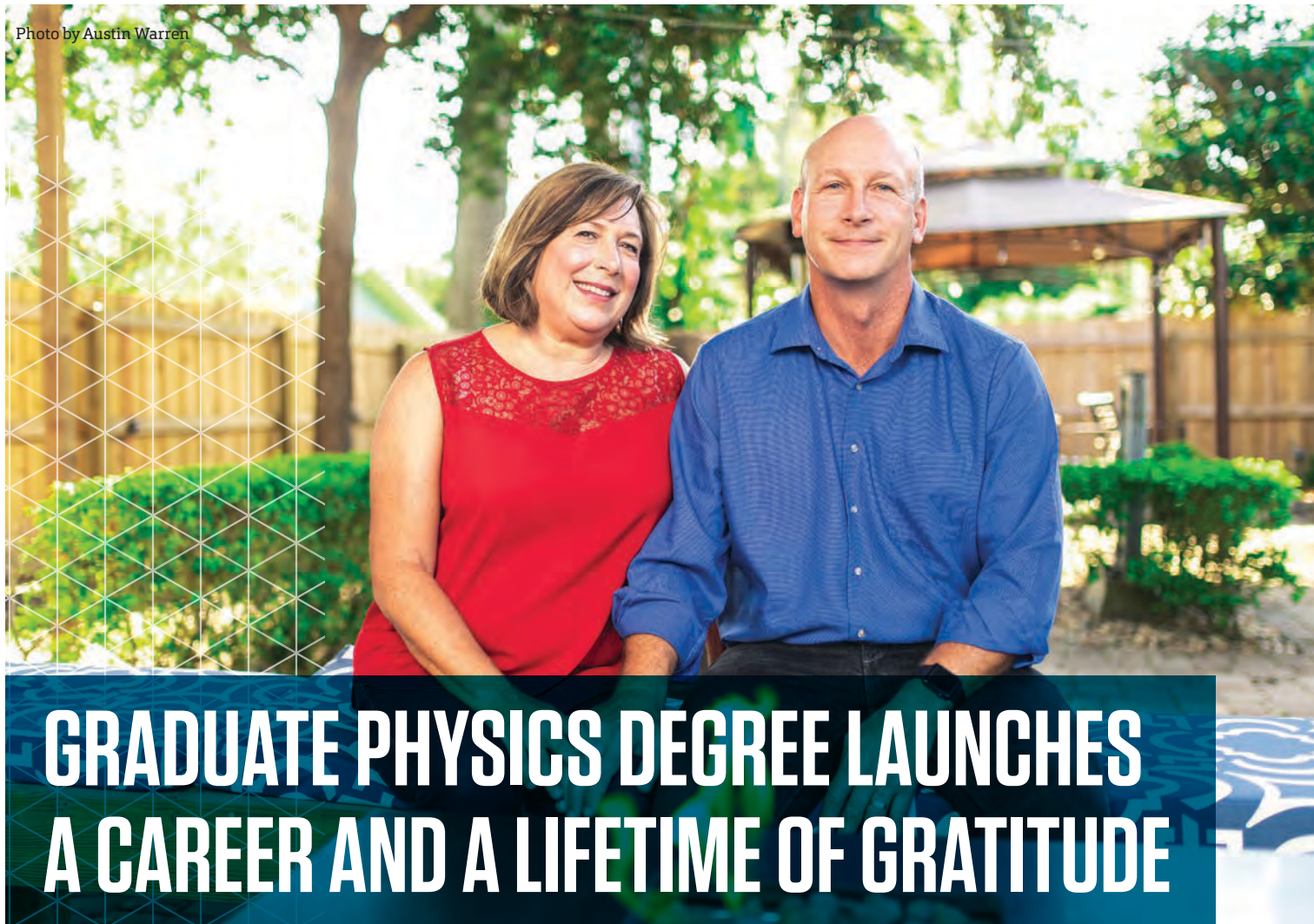
“My father is extremely proud to have both of his sons involved in the academy,” says Tom.

The Sieckhauses were recognized by the academy in April 2018 for their philanthropic leadership in supporting the Advanced Construction and Materials Laboratory with a \$2 million donation from Clayco.

“Clayco was pleased to make a major investment in this project,” says Steve. “Many of our construction professionals are civil engineers who graduated from Missouri S&T. We have benefited as a company from the great education the university provides.”

“Our company’s brand mantra, ‘Beyond These Walls,’ is about inspiring creative minds to cultivate new ideas,” says Tom. “We believe the lab will be a difference-maker for the university. And the research conducted there will affect the daily lives of millions for generations to come.” ■

Photo by Austin Warren



GRADUATE PHYSICS DEGREE LAUNCHES A CAREER AND A LIFETIME OF GRATITUDE

Steve Frey, MS Phys'86, was a Missouri S&T graduate student attending a Friday physics colloquium when he had a light-bulb moment.

"The speaker was a systems engineer and described his job as understanding a lot of different technologies and integrating them," says Frey, who came to S&T on a teaching assistantship after earning a bachelor's degree in engineering physics from Bradley University. "There weren't many programs or degrees in systems engineering at the time. It hit me that he described what I wanted to do professionally. That was my 'aha' moment in school."

After graduating in 1986 with a master's degree in physics, Frey joined Lockheed Martin Corp. (then Martin Marietta Aerospace) as a systems engineer working on infrared night vision systems for aircraft. His wife, **Michelle**, who also graduated from Bradley, joined the company as a mechanical engineer. Frey worked for Lockheed for nearly three decades in a number of leadership roles, including director of research and development, where he led projects in laser directed energy and remote sensing.

"My kids told me that my job had a really high 'cool factor,'" says Frey. "I spent 27 years with the company and enjoyed it greatly."

Frey took his talents to the entrepreneurial sector in 2013, first as vice president of a startup that was developing fiber optical sensors, then to Ocean Optics, an optic spectroscopy company, as vice president of engineering. He currently serves as principal systems architect and engineer with L3 Technologies, a defense technology company.

"I support a group of companies within the intelligence, surveillance and reconnaissance segment," he says. "L3 is poised to make a big step up from a technology component supplier to a larger defense systems company, and I wanted to be a part of that."

Throughout his career, Frey has placed a priority on giving back to Missouri S&T.

He is a past member of the Miner Alumni Association board of directors and serves on the Dean's Leadership Council for the College of Arts, Sciences, and Business. He received an Award of Professional Distinction in physics in 2007. The Freys are members of the Order of the Golden Shillelagh, and they recently established the Steve and Michelle Frey Endowed Scholarship for the College of Arts, Sciences, and Business.

"We wanted to make it a little easier for promising students who want to work hard to get an education."

"The work I did in Rolla made a big difference in my career," says Frey. "Michelle and I both come from families that valued education. I was the first in my family to graduate from college, so I understand how difficult it is. We wanted to make it a little easier for promising students who want to work hard to get an education."

In 2014 the Freys became a two-generation Miner family when their daughter, **Lydia**, ChE'14, graduated with a degree in chemical engineering. She works for PepsiCo in Kansas City as a maintenance engineer and supervisor. The Frey's son, Grant, who holds an associate's degree from Valencia Community College in Orlando, Fla., plans to pursue a bachelor's degree in game design.

"Lydia loved her time at S&T, and now she and her team keep the Pepsi and Mountain Dew cans and bottles flowing," says Frey, who appreciates the changes he's seen at S&T.

"The campus facilities have improved tremendously, but the real change is in the students," Frey says. "It's nice to walk the campus and see the diversity." ■



RAISING THE CURTAIN ON RENOVATIONS

This fall the curtain rose on renovations to Leach Theatre, including new seating, carpeting, handrails and a center aisle. The new seats are wider, designed with back support, and have fold-down tablet arms so the theater can be used as a lecture hall. The new center aisle provides better access to seating. Since Leach Theatre's inaugural season 27 years ago, the curtain has gone up on more than 2,500 performances and programs. A plaque honoring donors who funded the theater's original seats will be displayed in the lobby.

NATIONWIDE SEARCH LAUNCHED FOR S&T CHANCELLOR

The University of Missouri System has launched a nationwide search for the position of Missouri S&T chancellor. The 23-member search committee is led by co-chairs **Francisca Oboh-Ikuenobe**, S&T professor of geology and geophysics and biological sciences, and **Tom Voss**, EE'69, vice president of the S&T Board of Trustees and a former member of the University of Missouri Board of Curators. **Chris Maples** was appointed S&T interim chancellor by UM System President **Mun Y. Choi** in May 2017 and has served since then.



COLLEGE FACTUAL
RATES S&T AMONG THE
NATION'S BEST FOR
ENGINEERING

Missouri S&T has again been named one of the nation's best universities for engineering by College Factual. The guide ranks S&T among the top 1 percent of all U.S. colleges and universities in three categories: best engineering program, best engineering program for veterans and best engineering program for non-traditional students. S&T also ranks in the top 5 percent in the category of best value for engineering programs. View the rankings at rol.la/college_factual.

ALUMNI OF INFLUENCE

NOMINATE A MINER FOR 2021

Missouri S&T is seeking nominations for our 2021 Alumni of Influence, the highest alumni honor bestowed by the university.

Since the university recognized our inaugural honorees in 2011, we've honored 38 distinguished alumni for their personal and professional achievements, service and legacy. Now we're preparing to recognize a new group of honorees during the university's sesquicentennial celebration.

Watch for an online nomination form at influence.mst.edu, or forward nominations to Darlene Ramsay, executive vice president of the Miner Alumni Association, at 573-341-4584 or ramsayd@mst.edu.

2011 HONOREES

Thomas Akers, Math'73, MS Math'75	Farouk El-Baz, MS GGph'61, PhD GGph'64	Mariana Rodriguez, CE'80
Dick Arnoldy, CE'69, MS EMgt'73	John Fairbanks, EE'71	Richard Stegemeier, PetE'50
Keith Bailey, ME'64	Gary Forsee, CE'72	Steve Sullivan, EE'89
Robert Bay, CE'49	Gary Havener, Math'62	Cindy Tang, Econ'85
Jerry Bayless, CE'59, MS CE'62	Thomas Holmes, MinE'50	*John Toomey, ME'49, MS ME'51
Jon Bereisa, EE'67, MS EE'70	*Vernon Jones, CE'53	*Ed Tuck, EE'53
Jim Bertelsmeyer, ChE'66	Fred Kummer, CE'55	Ted Weise, EE'67
Philip Chen, MS ME'65	John Mathes, CE'67, MS CE'68	Gary White, CE'85, MS CE'87
Delbert Day, CerE'58	*George Mueller, EE'39	Joan Woodard, Math'73
	Zebulun Nash, ChE'72	

2016 HONOREES

Joe Ballard, MS EMgt'72	Roger Dorf, ME'65	Sandra Magnus, Phys'86, MS EE'90
Bob Brackbill, MinE'42	Bipin Doshi, ChE'62, MS ChE'63	Dick Vitek, MS Chem'58
Bob Brinkmann, CE'71	Don Gunther, CE'60	Roy Wilkens, EE'66
Matt Coco, CE'66		

* deceased

OGS MEMBERS COME HOME FOR MINERFEST

OGS members gathered at Hasselmann Alumni House during MinerFest Homecoming for a reception and dinner honoring the Miner Alumni Association's 2018 award winners. Congratulations to the OGS members who received alumni association awards: **Diane Butrus**, CSci'85, **David Heikkinen**, ME'93, **Dale Morse**, EE'79, and **Dennis Leitterman**, EE'76, MS EE'77.



1. John Remmers and Catherine McCain visit with Keith and Bobbie Wedge during the OGS reception.
2. Members of the "Jackling Jocks" gather in front of the original Jackling Gym plaque, which now hangs in the John O. Farmer Lounge in Hasselmann Alumni House. From left: Bill Engelhardt, Newton Wells, Dick Boyett, Art Bell, Don McGovern and Bob Lewis.
3. Geology and geophysics professor Francisca Oboh-Ikuenobe (left) visits with S&T Trustee Mike Bytnar.
4. Back row from left: Pete Callahan, David Heikkinen and Dr. Ann Rueff Heikkinen; front row from left: Grace, Charlie and Joe Heikkinen, and Virginia Callahan, David's mother.
5. Miner Alumni Association 2018 honorees: Back row from left: Bill Tedesco, Larry Gragg, Dennis Leitterman, Dale Morse and Wenqing Hu (recipient of the Class of '42 Excellence in Teaching Award); front row from left: Karen Hogan, Diane Butrus and Traci Walker; not pictured: David Heikkinen.
6. Dixie Finley visits with friends during the OGS reception.
7. Alumni association honorees received handcrafted Joe Miner statues.
8. From left: Cori Nelson, Traci Walker, Anika Careaga and Sylvia Skouby.



THANK YOU FOR SUPPORTING THE STUDENT DESIGN CENTER EXPANSION

Fundraising is completed for an 8,000-square-foot addition to the Kummer Student Design Center, home of S&T's 20 student design teams. Thank you to our major donors: **Dick Arnoldy**, CE'69, MS EMgt'73, retired chairman of ARCO Construction Co.; Brinkmann Constructors, founded by **Bob Brinkmann**, CE'71; **Mike Bytnar**, ME'68, MS EMgt'73, retired president of Nooter Corp.; **Gary Havener**, Math'62, president of the Havener Companies; and OGS founding member **Fred Kummer**, CE'55, who also provided the naming gift. Watch for information on a celebration and hard hat preview.



TAILGATE TEAMWORK FOR A GREAT CAUSE

Students and alumni teamed up during Minerfest Homecoming to collect food and household items for the food and supply pantry sponsored by Student Diversity Initiatives (SDI). Participants who donated an item received free admission to the Miner Alumni Association's tailgate party preceding the Homecoming football game. Donations went to SDI's Commuter's Commodities program, which provides students with food, household goods, cleaning supplies and hygiene products. Thank you to everyone who teamed up to make a difference.



Rebecca Molt, a junior in ceramic engineering from Camdenton, Mo., joins a group of students writing thank you notes to their scholarship donors in Hasselmann Alumni House.

Every semester since fall 2014, the students who hold endowed scholarships at Missouri S&T have done something “old fashioned” in the Instagram Age — they’ve picked up pen and paper and written thank you notes to their donors. This fall, more than 1,100 students joined in.

During the first week of classes every semester, scholarship students visit Hasselmann Alumni House to participate in Postmark Gratitude, a letter-writing marathon designed to highlight the partnership that students share with their scholarship donors, and connect students and their benefactors in a meaningful way.

“The act of writing a thank you note — and the reciprocal act of receiving it — creates a one-to-one connection that is powerful in its simplicity and profound in its impact,” says **Joan Nesbitt**, vice chancellor for University Advancement. “The feedback we receive from donors is exceptionally positive. But what is equally gratifying is the fact that so many students say they appreciate the opportunity to communicate with their donors.”

For **Steve Rector**, PetE’72, MS PetE’73, a first-generation college graduate who came to S&T on a scholarship, giving back is important. Rector and his wife, **Susan**, receive approximately 30 thank you notes every year from students supported by the Stephen and Susan Rector Petroleum Engineering Endowed Scholarship.

“We read every one of those cards,” says Rector, president of the Miner Alumni Association Board of Directors. “It’s always a delight to learn about the students who hold our scholarships. Many S&T students are first-generation college students like I was. I owe my career success to the scholarship I held for four years.”



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WITH GRATITUDE

This past year, Missouri S&T was honored to receive charitable gifts and pledges of more than \$22.6 million — the second-largest fundraising year in our history. From labs and learning centers to scholarships and student athletics, your generosity is making a difference in the lives of proud Miners.

Thank you for the gift of your support.