Fall 2014

CEAE Update

Civil, Environmental & Architectural Engineering at the University of Kansas

KU Concrete Canoe team wins Spirit Award

Letter from the Chair

Dear Friends,

Greetings and welcome to the first edition of CEAE Update—a newsletter designed to bring you the latest news and events from KU's Civil, Environmental and Architectural Engineering Department.

As an alumnus, student or friend, you are well aware that our department is a close-knit community. We value the relationships made and fostered in Learned Hall and we all strive to ensure those relationships continue over time and across cities, states or even countries. We want to know and share the successes and accomplishments you attain throughout your careers. We want to tell the stories of how the department is making a difference in people's lives in communities around the world. We're confident you want to share in this knowledge, too. So we created this newsletter as way to stay connected, to share these stories and to bring us closer together.

As such, the 2013-14 school year was filled with accomplishments and change for our students, faculty and alumni.

A total of 43 Ph.D. students—the highest number in the history of the department—were enrolled in our department this past year.

Our faculty members continue to receive awards and honors for their work in the field. (See the News & Notes section on page 2.) From a distinguished service award to new and challenging positions, and so much in between, we are all proud of the accomplishments achieved and the honor it brings to the school and our program.

For the first time in 18 years, the KU Concrete Canoe team competed in the national competition in Johnstown, Pa., at the end of June. And we know you'll join us in congratulating them on bringing home the Team Spirit Award from the competition. Read more about the Concrete Canoe team on page 6.

While we welcomed five new staff members in 2013, we are also saying goodbye to others. The 2013-14 school year was the last for Professors Stan Rolfe and Tom Mulinazzi, who are both retiring (page 2); as well as JoAnn Browning and Adolfo Matamoros who are moving on to other opportunities. They all will be missed. Also, most sadly, we lost one of our most cherished colleagues this spring. Professor Tom Glavanich lost a years-long battle with cancer in April (page 11). He is already sorely missed.

As we now begin the 2014-15 academic year, we have even more exciting changes to share.

Three new faculty members will be joining us: Masoud K. Darabi, Ph.D. in Advanced Infrastructure Materials from Texas A&M University; Alexandra Kondyli, Ph.D. in Transportation Engineering from the University of Florida; and Brian Lines, Ph.D. in Construction Management from Arizona State University. Learn more about our newest faculty on page 9.

Some of the most exciting changes for us in the coming year will be in the new spaces we'll be occupying. This spring construction was completed on our brand new Concrete Laboratory in Learned Hall. In September we will begin research in our new 10,000 square foot state-of the-art Structural Testing Facility on west campus. Also this fall, we will begin work on a brand new Asphalt Laboratory in Learned Hall, which represents the first upgrade to our Geotechnical Labs. Learn more on page 4.

Finally, we are constantly grateful for the support we receive from you. The financial donations we receive from our network of friends help us provide the much-needed services that will ensure our students are prepared for their own futures of success. To make a financial contribution to the School of Engineering, please visit kuendowment.org/engineering. You can even designate support specifically for this department.

We hope you'll take time to read through the updates found in this inaugural edition of CEAE Update, and we hope you'll share with us your news to be featured in a future issue. Please contact Reta Solwa at rsolwa@ku.edu to share your story.

As always, we appreciate your continued commitment to the KU School of Engineering's CEAE Department.

Sincerely,

Dave Darwin
Distinguished Professor and Department Chair

FAST FACT

1873: The year the first engineering degree was conferred at the University of Kansas

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ON THE COVER
Canoe member Chris Borba removes vinyl stencils to reveal the team's rendition of the Kansas state seal, the centerpiece of their 'Ad Astra' theme.

UPDATES

Distinguished Professor **Dave Darwin** was selected to receive the 2013 Concrete Research Council Arthur J. Boase Award from the American Concrete Institute.

Associate Professor **Caroline Bennett** was named a Faculty Fellow for the KU Center for Teaching Excellence.

Associate Professor **Mario Medina** received the Best Presentation Award at the 7th Global Insulation Conference held in Riga, Latvia.

Environmental engineering doctoral student **Jodi Gentry** received the Engineers Without Borders USA 2013 Professional Founder's Award. Gentry started KU's student chapter as well as the Sunflower Professionals chapter of Engineers Without Borders.

BRYAN YOUNG NAMED DIRECTOR OF UNIVERSITY HONORS PROGRAM

Bryan Young, associate professor, has been named director for the University Honors Program, effective June 1. He is taking the post vacated by Jonathan Earle who is now the dean of the Honors College at Louisiana State University.

Young has been involved with the honors program since he joined the KU faculty in 2000. He has served as a Faculty Fellow since 2006. As a Fellow, he has advised nearly 200 honors students, taught eight freshman honors seminars, developed the first Commons Course, served on multiple committees, reviewed applications, met with prospective students and helped with orientation sessions.

An alumnus with KU master's and bachelor's degrees in engineering, Young completed his doctorate in civil and environmental engineering from the University of Iowa in 2000. At KU, he has been honored with numerous awards for teaching and research, including a W.T. Kemper Fellowship for Excellence in Teaching in 2007 and the School of Engineering's Miller Scholar Award in 2005 and 2009.

Young has deep ties to the honors program. His father, philosophy professor J. Michael Young, led the program from 1990 to 1995. Bryan Young is himself a graduate of the program (1995), and his son, Cal, is currently a KU honors student.

STAN ROLFE RECEIVES DISTINGUISHED ENGINEERING SERVICE AWARD

Stan Rolfe

Stan Rolfe, the Alfred P. Learned Distinguished Professor of Civil, Environmental and Architectural Engineering Emeritus, received the Distinguished Engineering Service Award, the School of Engineering's highest honor, at a ceremony on May 8.

The award is made on the basis of an individual's contribution to the public good, governmental service or the educational system, or contributions to the theories and practices of engineering, research and development in new fields of engineering or direction of an organization that has made exceptional contributions in design, production and development. The School of Engineering Advisory Board has given the Distinguished Engineering Service Award annually since 1980.

Rolfe joined the civil engineering program at KU in 1969 and, with his leadership in fracture mechanics and fatigue, he helped build the university into a global leader in steel research. His research has led directly to longer lifespans, improved safety and decreased costs for structures such as bridges, buildings, ships and pipelines.

From 1975 to 1998, Rolfe chaired the CEAE department. In 2012, he provided strong, active leadership to the School of Engineering during a one-year term as interim dean of engineering. Rolfe has earned a number of highly prestigious national awards during his long and distinguished career. He's a member of the National Academy of Engineering, which honors those who have made outstanding contributions to engineering research, practice or education. This is one of the highest professional distinctions accorded to an engineer.

Earlier this year, Rolfe announced his retirement at the end of the 2013-14 school year. He will enjoy spending more time with his wife, Phyllis, their three children, all of whom are KU graduates, and 12 grandchildren.

PROFESSOR MULINAZZI RETIRES

The 2013-14 school year was the last for Professor **Thomas E. Mulinazzi**, who decided to retire. Mulinazzi joined the KU faculty in 1979 and held several leadership roles, including as full-time associate dean of the School of Engineering from 1992-2001, as department chair from 2003-2008, and as interim chair for the 2012-13 academic year. He received the Lifetime Service Award from the Kansas Society of Professional Engineers in early 2014 in recognition of his lifetime of service to the engineering profession, his community and society.

In retirement, Mulinazzi plans to still serve as an academic and professional advisor to the CEAE

students, be an active member on two advisory boards in the Lawrence community, read books that aren't textbooks, spend time with his grandchildren, play bridge and attend every sporting event at KU.

If you'd like to donate to the Professor Thomas E. Mulinazzi Family Scholarship Fund, which is dedicated to the education and development of future KU Engineers, please visit the Douglas County Community Foundation website at dccfoundation.org, and select the fund from a drop-down menu.

PROFESSORS BROWNING AND MATAMOROS JOIN FACULTY AT UT SAN ANTONIO

This summer, we also said goodbye to two esteemed faculty members as they moved on to new opportunities. **JoAnn Browning**, associate dean of administration and professor of civil engineering in the School of Engineering, and her husband **Adolfo Matamoros**, professor and associate chair for undergraduate studies, have relocated to Texas to join the faculty at the University of Texas at San Antonio.

Browning has been named Dean and David and Jennifer Spencer Distinguished Chair of the College of Engineering. Professor Matamoros will be joining the college and Department of Civil and Environmental Engineering as professor and Peter Flawn Distinguished Chair.

Browning earned both her bachelor's and master's degrees in civil engineering from the University of Kentucky. She earned her Ph.D. in civil engineering from Purdue University and joined the faculty at KU as assistant professor in 1998, earning tenure in 2004 and promotion to full professor in 2010. Her career at KU has included service on the University Senate, as a faculty mentor for Student Athlete Support Services, and as a member of the Campus Historic Preservation Board and Bay View Alliance KU Leadership Group, among numerous department, college and university committees. She twice was awarded the university's Miller Award for Distinguished Professional Service (2004 and 2011) and was the 2012 recipient of the Henry E. Gould Award for Distinguished Service to Undergraduate Education.

Matamoros had been on the KU faculty since 1999. He earned his licentiate's degree in civil engineering from the University of Costa Rica; he earned both his master's and doctoral degrees from the University of Illinois at Urbana. He served as professor and associate chair for undergraduate studies in the CEAE department. His research interests include design and behavior of reinforced concrete members, fatigue repair in structural steel bridges and earthquake engineering.

RECENT SCHOLARSHIP/AWARD/ RECOGNITION RECIPIENTS

The ITE Student Chapter took all three places in the Kell Competition held at 2014 Joint Western-Midwestern Annual Meeting in Rapid City, SD. Kell Competition is the event where students develop innovative solutions to a transportation problem: 1st Prize- Allison Bruner & team; 2nd Prize- Kwaku Boakye & team; 3rd Prize - Prathmesh Argade and Vishal Sarikonda (tied positions).

Marie-Odile Fortier completed her comprehensive exam titled "Geographically Specific Life Cycle Assessment of Biofuels from Wastewater Algae" with honors.

Zach Olson and Michael Kopper received civil engineering scholarships from the Kansas Chapter of the American Public Works Association (APWA) for the 2014-2015 academic year.

Farshid Kiani presented his master's thesis in environmental engineering titled "Effect of Different Blends of Biofuel on Exhaust Emissions of a Cl Engine" with honors.

Rasha Faraj successfully defended her master's thesis in environmental science titled, "The Role of Carbon Biodegradability Nature on the Morphology, Structure, and Performance of Aerobic Granular Sludge" with honors.

Katherine Roth received the Robert J. Besal Fund Scholarship for the 2014-15 academic year. She was selected for her superior presentation of her lighting solution to the client.

Dr. Deep Khatri successfully defended his Ph.D. dissertation titled "Laboratory and Field Performance of Steel-Reinforced High Density Polyethylene Pipes Buried in a Ditch Condition Under a Shallow Cover."

Graduate student **Lindsey Yasarer** was granted a 2014 summer research fellowship.

Omar Ismael successfully defended his master's thesis titled "Evaluating the Behavior of Laterally Loaded Pile Under Scoured Condition by Model Tests" with honors.

CE undergraduate **Cody Porter** was one of of eight engineering students nationwide to receive a scholarship from the American Consulting Engineers Council (ACEC). He has been awarded a $5,000 ACEC Business Insurance Trust Scholarship, as well as an expenses-paid trip to the ACEC Fall 2014 Conference in Hawaii.

2014 graduate **Adam Morel** was one of two engineering students to receive a $1,500 scholarship from the Coalition of American Structural Engineers.

Kyoung Ok Lee successfully defended her Ph.D. dissertation in architectural engineering titled, "Experimental and Simulation Approaches for Optimizing the Thermal Performance of Building Enclosures Containing Phase Change Materials" with honors.

NEW SPACES

Functional workspaces. Sophisticated labs. State-of-the-art equipment. With an emphasis on experimental research, these kinds of facilities are not only in demand at the KU School of Engineering, they are required. With help from the university and donors, they are now becoming reality—making our research stronger, our classes more engaging, and the results of our work more widely known in the field.

The 5-story tall Structural Testing Facility and Student Projects Center is spreading the KU School of Engineering footprint to KU's west campus. Completed this summer, the building contains a massive strong wall that will advance KU's research capabilities.

CONCRETE LABORATORY

This past spring, construction was completed on CEAE's brand new Concrete Laboratory in Learned Hall. This 4,000-square-foot space—funded approximately one-third by the School of Engineering and two-thirds by donors—will allow both our undergraduate and graduate students to use the latest state-of-the art technology to learn about and perform research on concrete.

The laboratory serves as both a teaching and research facility and is equipped to run a wide variety of standard tests on cement, aggregates, and concrete. Freeze-thaw equipment and a walk-in freezer are both available for running tests, and concrete is cured under controlled temperature and humidity in the lab's curing room. Two hydraulic testing machines, with high load capacities are used for concrete strength determination.

STRUCTURAL TESTING FACILITY

In September, we will begin our first research in the new 10,000-square-foot state-of-the-art Structural Testing Facility on west campus. Designed for conducting large-scale tests of structural components and subassemblies, the lab includes a strong floor that can carry 100,000 lbs. every three feet in both directions, a 40-foot high L-shaped strong wall, a high-capacity hydraulic system, and other advanced instrumentation.

ASPHALT LABORATORY

This fall we begin work on a brand new 1,300-square-foot Asphalt Laboratory in Learned Hall, which represents the first upgrade to our Geotechnical Labs. With the addition of this sophisticated Asphalt Lab KU will be one of a few universities in the country able to conduct research that could change asphalt for use in the public and private sectors.

New state-of-the-art equipment will allow researchers to characterize asphalt in a very modern way, specific to a multitude of changing climate conditions. Dr. Masoud Darabi, who will be teaching the Transportation Materials class in the new lab, is planning research on how to develop an asphalt material that will be more resistant to cracking and that may potentially be able to heal itself.

In addition to the latest technology in research, students will benefit from the state-of-the-art class equipment and features. The new lab space will allow students to become familiar with the equipment, provide room to perform and observe a variety of tests, enable them to work on the composites that are being used in the advanced materials industry, and gain experience that will open a number of new job opportunities.

GEOTECHNICAL LABORATORY

Apart from the installation of new cabinets in 2000, the Geotechnical Lab hasn't been updated or renovated since Learned Hall was built in the 1960s—but plans are to change that in the near future.

Along with the Asphalt Lab, renovations also are needed to modernize and enlarge the Geotech Lab. Once finished, the updated lab will be about 2,100 square feet, allowing more students to fit at a time and providing a separate area for graduate students and their research. An area will also be dedicated to geosynthetics research—work that will be led by Prof. Jie Han, and which will be found in only a few places across the country.

"This will be the first time we've been able to redesign the lab and so we wanted to ensure that it's more accessible for our students, easier to use, and that it includes some of the essential high-tech equipment we need," Prof. Robert Parsons said. "It's our 50-year renovation and we want to be sure everything is done right to give us an exemplary research and learning space for our students and faculty."

Plans for the new Geotech Lab include purchasing a new triaxial system, a direct shear testing machine, and unconfined compression test machine. The department also plans to rebuild the resilient modulus that was donated by the Kansas Department of Transportation.

Construction on the Geotech Lab is expected to begin once funding is available and will take approximately 18 months to complete.

YOU CAN HELP

Innovative engineering benefits local, regional, and worldwide communities. To help build and equip these new spaces, please contact Molly Paugh, 785-832-7319 or mpaugh@kuendowment.org.

STUDENT COMPETITIONS

KU Concrete Canoe Team Wins Team Spirit Award at National Contest

Call it a comeback—a well-earned and well-deserved comeback.

Equipped with a wealth of new insights on design and construction—as well the national award for Team Spirit—members of the University of Kansas School of Engineering Concrete Canoe team are taking lessons learned from a national competition and working toward a return trip next year.

"It was a great experience, even if we didn't fare as well as we would've liked on a competitive level," said Billy Hirchert, senior in civil engineering and captain of KU's Concrete Canoe team. "We learned a lot for next year about what's needed to take the next step and have a stronger showing at nationals."

KU finished outside the top 10 in the American Society of Civil Engineers national concrete canoe competition held in June, at the University of Pennsylvania-Johnstown, in Johnstown, Pa. KU earned a trip to nationals after winning its regional competition in May at Oklahoma State University.

Hirchert said the national competition was a great chance to network and share ideas with fellow engineers from other schools. It also provided an opportunity to discuss aspects of the canoe that could improve the team's performance in the future.

"We plan to change the entire design of the boat for next year. We plan to make a much thinner canoe, which will reduce our weight, since it was more than 200 pounds heavier than the lightest one there," Hirchert said. "We'll also reconfigure our hull design. The speed of the boat is ratio of length to width, and after seeing these other boats, we realized we need a longer and narrower design."

In addition to picking up great lessons on design and construction, the Jayhawk team managed to bring home some hardware. KU earned the Spirit of the Competition Award. The team dealt with flight delays and cancellations en route to the competition, and also had a fender-bender with the trailer hauling the canoe—there were no injuries and only minor damage.

"We ran into just a lot of not awesome things on our way there. And between that and not having a strong showing competitively, we still kept a really great attitude, and the organizers recognized that," Hirchert said. "We also gave a lot of support to one of the international universities (the University of Tongji, from Shanghai) who showed up with no way to transport their boat anywhere. We gave them a hand getting their boat from place to place and getting set up."

KU returns a handful of experienced people for next year's team, and Hirchert said they'll need additional volunteers for all aspects of the project, including construction, mix design, structural analysis, casting and paddling to ensure they're ready to make another run next year.

"We did the right things this year to get to nationals. And that's a great accomplishment," Hirchert said. "For next year, we're looking at better quality control on our boat, while maintaining the other things we've always been good at. We'll be back and we'll be even better."

After casting, the concrete canoe had to be checked twice daily for 28 days. The team devised a system of a plastic, burlap, humidifiers, and periodic misting with a hose to keep the concrete in its ideal conditions.

Top: Paddlers Allison Bruner and Laura Blake after the women's sprint race at regionals in Stillwater, OK.

Bottom: The 2013 team at the regional competition hosted by Oklahoma State University

From Airman to Engineer: Concrete Canoe Team captain never stops challenging himself

When Billy Hirchert was preparing to graduate high school, he had a tough decision to make between his two passions. Would he join the United States Air Force, or study engineering at one of the many colleges that was offering him academic scholarships? It's a good thing no one told Billy that couldn't have it all.

Hirchert enlisted in the Air Force immediately after graduation in 2003, leaving his hometown of Washburn, N.D., behind, and envisioning a future where he would immediately put his science- and math-oriented brain to use in avionics while serving his country. He was shocked when six months later—after a battery of assessments and tests—he found himself being trained as a Korean translator in an elite military program. It was not at all what he expected, but as he has always done, he welcomed the challenge.

Senior Airman Hirchert was honorably discharged from the Air Force after his five-year enlistment. He traveled around Europe before taking a job in intelligence with the National Security Agency (NSA) at Fort Bragg in North Carolina. It was there that he met his future wife, Shana, a physician and captain in the U.S. Army.

Now living on Ft. Leavenworth, where his wife is stationed, Hirchert began his undergraduate studies in civil engineering in the fall of 2012—a long-deferred plan finally taking shape.

During his two years in the CEAE program, Hirchert has enjoyed the personal attention he receives from his professors because of the small class sizes and close community. He finds it surprising that the faculty—even professors whose classes he's never taken—seem to know him by name.

"I've come across professors who I know by reputation, but whom I've never actually met and they know me by name," Hirchert said. "That says something about the caliber of faculty here. They take the time to know the students so that it's more than just standing in front of the class, and that's something I wouldn't trade for anything."

But with Hirchert, it's more than that. With his strong work ethic, attention to detail, and dedication to excellence, Hirchert has caught the attention of the CEAE faculty as he has become a leader among his peers. During this past year, he served as co-captain of the KU Concrete Canoe team, and helped lead the team to the ASCE National Concrete Canoe Competition, which was held at the University of Pittsburgh at Johnstown in Johnstown, Pa. in June, where the team was awarded the Team Spirit Award.

"It is obvious that Billy is someone you take notice of," Professor David Parr, Hirchert's advisor, said. "He came to KU already with a world of experience under his belt, with successful careers in the Air Force and the NSA. But he continues to shine both in and out of the classroom. We'll all be keeping an eye on his career as it soars."

This year, Hirchert will be the captain of the team and has been hard at work planning the ways the team can improve on its award-winning work.

"We were so proud to take first or second place in every category at regionals," he said. "But the weight of the boat was still too high. It was pretty and it was fast, no doubt. But the average weight among the competitors was about 215 pounds; we were at 353 pounds. This year, my goal is to work with the team to shave off 100 to 200 pounds."

Hirchert is also working to publish a research paper on basalt fiber reinforcement mesh that he co-wrote with other members of the concrete canoe team.

With his wife's military career playing a major role in his future, Hirchert's main goal for after graduation is to find a career with a global engineering firm where he can be mobile and flexible, moving to wherever his wife is stationed.

"I always enjoy being challenged," he said. "I'm excited at the opportunities that would be available through a large company like Black & Veatch or Burns & McDonnell. I know they would have not only the resources to let me go anywhere in the world where my wife is stationed, but the work they do is immensely challenging and rewarding. It would be ideal for me, and I'm working hard to make sure I achieve that goal."

FAST FACT

From Bosnia and Bangladesh to Pakistan and Peru, CEAE has more than **100** students living in approximately **40** countries around the globe.

New faculty members join KU from around the country and bring a range of expertise to the department.

Alexandra Kondyli, Ph.D.

Area of specialty
Transportation Engineering

Why did you become an engineer?
I chose engineering to help understand and find solutions to problems that are important to society, such as the development and operation of complex transportation systems that are so important in every aspect of our lives.

What does the future hold for engineering?
The future holds many challenges for engineers especially with regards to climate change and reduced energy resources, sustainability of our infrastructure, and reverse engineering the brain.

Brian Lines, Ph.D.

Area of specialty
Construction Management

Why did you become an engineer?
I enjoy working on the cutting edge to solve problems that have not been solved before.

What does the future hold for engineering?
For future engineers, technical engineering skills will remain important and soft-side skills of leadership, communication, and project management will become increasingly crucial to career advancement.

Masoud Darabi, Ph.D.

Area of specialty
Materials, Geotech

Why did you become an engineer?
When I was a child, I couldn't wait to carry a stone and shatter my old toys to see what was inside. When I got older I used any opportunity to grab tools and disassemble/reassemble my bicycle, for no particular reason. I also enjoyed math. Later, it became evident to me that I like to be an engineer.

What does the future hold for engineering?
In my opinion, the future of engineering will be toward saving the planet through development of alternative energy resources, as well as creation of advanced, sustainable, and environmental-friendly materials.

Doing her part to guide and mentor the next generation of engineers

Natalie McCombs, PE, SE, ENV SP
Senior Bridge Project Engineer
HNTB

Natalie McCombs' career inspiration didn't come from a beautiful and inspiring bridge she saw from a distance once upon a time. Nor did it come from a love of numbers and building blocks at a very young age. For McCombs, it was a high school home economics assignment to design and lay out a kitchen that sparked the fire for a bright career.

"It was so fun to logically think through what's the best way to lay it all out. What will be most effective," she remembers.

From that day, it wasn't long until McCombs—still a high school senior in Goodland, Kan.—started taking drafting classes at a nearby vocational-technical college for school credit. In 1996, McCombs graduated with an associate's degree in drafting from Northwest Kansas Technical College, all the while working part-time at HNTB as a bridge technician, detailing bridge plans from design sketches. During this time, she felt a disconnect in her work—not fully understanding how the drawings she worked on fit into the larger engineering picture. It was this curiosity that led McCombs to KU.

"I had a non-traditional approach to my education," McCombs said, explaining the path that led her to the KU School of Engineering.

After a few years of prerequisite classes at Johnson County Community College, McCombs started working on her bachelor's degree at KU in 1999. Living in Kansas City, McCombs continued her part-time job at HNTB and commuted into Lawrence for classes. With support and mentorship from Professor Steve McCabe (now professor emeritus) whom she credits for understanding what she was trying to do and providing her with the advice she needed, McCombs successfully completed her studies and graduated in 2001.

With bachelor's degree in hand, McCombs' part-time job with HNTB became a fulfilling, and successful career. But she still wasn't done. In 2002, she returned to school yet again—this time with her eyes set on a master's degree in civil engineering—utilizing a KU program aimed at working professionals.

As a bridge project engineer, McCombs has enjoyed her work with HNTB, a global engineering powerhouse, which has helped her to work on prominent and signature projects all over the county, in increasingly senior positions over the past 14 years. Among her favorite and highest achievements: the Amelia Earhart Bridge in Atchison, Kan.

"While I was working as part of a team of eight engineers and three technicians, I was also making really important engineering decisions and coming up with the solutions. It was definitely a team effort—each person designs a specific component. But it was the first time for me where I was making big decisions, so it was a very special project for me and my career."

With her growing resume also come growing responsibilities and opportunities to make a difference on an international scale. McCombs has recently joined the technical advisory committee for Bridging the Gap Africa, an organization whose mission is to build bridges in marginalized African communities in order to save lives and prevent drowning incidents in impassable rivers.

McCombs strives not only to be a proficient engineer for her clients and her company; she also makes a point to be a mentor to the next generation of professionals. She helped start a mentoring program at HNTB to ensure knowledge and skills are being effectively passed on; and she is also happy to see a growing number of women in the field. She volunteered with a former program called Girls to Women, a mentoring program for middle-school girls to encourage future careers in science and technology, and she volunteers with Kansas City-based nonprofit PREP-KC, which helps establish a bridge for urban core students to see future career opportunities focused on STEM (Science, Technology, Engineering and Math) careers.

"I want these kids—boys and girls—to understand it's about investing in yourself and just getting your foot in the door. Once you do that, you can keep developing the skills. Don't let being an outsider stop you, because there are always ways to get where you want to go. It takes hard work; but with hard work, the possibilities really are endless."

FAST FACT

CEAE boasts a total of nearly **6,000** living alumni.

In Memoriam

STUDENTS, COLLEAGUES AND FRIENDS MOURN THE PASSING OF PROFESSOR THOMAS E. GLAVINICH

The University of Kansas lost a treasured member of its family on April 27, 2014, when Associate Professor Thomas Glavinich, D.E., P.E., lost his three-and-a-half year long battle with cancer. He was 62 years old.

"Tom showed amazing dedication to his field and, especially, his students," Dave Darwin, chair of the Department of Civil, Environmental & Architectural Engineering, said. "He brought industry insight to the classroom and was an active contributor to the profession. He will be remembered as a mentor to young faculty and students alike. Tom left an impression on all he met and worked with. He is greatly missed."

Glavinich's long association with KU began as a student in the 1970s. After earning his undergraduate degree in electrical engineering in 1976 from KU, Glavinich worked for a number of prominent firms in the Kansas City area, including Black & Veatch, Burns & McDonnell and Hallmark/Crown Center Redevelopment Co. He also earned an MBA from KU, a master's degree in electrical engineering from the University of Missouri and a doctorate in engineering from KU in 1990.

He became a full-time faculty member at KU in 1992 and served as director of the university's architectural engineering and construction management programs. Michael Branicky, dean of the KU School of Engineering, remembered Glavinich's impact on the department.

"As both an alumnus and a professor, Tom created and shared a body of knowledge and built solid relationships," Branicky said. "The School of Engineering is deeply saddened by the loss of one of our own."

Glavinich was an expert in electrical systems as well as contractor best practices, and he was a registered professional engineer in three states. As a prolific researcher and author, his works included "Contractor's Guide to Green Building Construction" in 2008, and "T&D (Transmission & Distribution) Worksite Shock Prevention Strategies" for the electric power industry in 2011.

During the course of his career, he received many honors and distinctions, including the Student Chapter Adviser Award and the Industry Partner Award from the National Electrical Contractors Association in 2010 and 2007, respectively; and the Education Excellence Award and the Outstanding Educator Award from the Kansas City Section of the Institute of Electrical and Electronics Engineers in 2001 and 2000, respectively. At KU, he was a HOPE Award finalist in 2008; he received the Bradley Award for Excellence in Teaching from the School of Architecture, Design and Planning in 1999; and the Gould Award for Distinguished Service To Undergraduate Education from the School of Engineering in 1995. He was a fellow of the Architectural Engineering Institute of the American Society of Civil Engineers and served as the institute's president from 2000–2001.

Glavinich is survived by his loving wife of 39 years, Marianne; their children Jill, Anne, Meg, Jay, and their spouses; two grandsons William and John; and his brother, Bill.

A memorial service was held on May 1 at St. Joseph Catholic Church in Shawnee, Kansas. Those interested in making a memorial contribution can contribute to the Thomas E. Glavinich endowment at KU Endowment, St. Joseph Catholic Church, or Saint Luke's Hospice House.

THANKS TO THE SUPPORT of family, friends and alumni, a new endowment to support the Architectural Engineering and Construction Management programs has been created in Glavinich's memory. To help build this fund, please contact Molly Paugh, 785-832-7319 or mpaugh@kuendowment.org or visit www.kuendowment.org and specify that you'd like to make a gift in memory of Dr. Thomas Glavinich. Memorial contributions can also be made in Glavinich's honor to the St. Joseph Catholic Church or Saint Luke's Hospice House.

Funding Our Future

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