01 May 2022

The Bridge Newsletter Spring 2022

Missouri University of Science and Technology

Missouri S&T
Spring 2022 | Vol. 48

The Bridge

Civil, Architectural and Environmental Engineering

On to nationals!

Steel Bridge Team wins fourth consecutive regional competition

page 20

Photo by Bob Phelan

Missouri S&T
care.mst.edu

FROM THE CHAIR: Joel G. Burken, Ph.D., P.E., BCEE, F.AEESP

The 2021-22 academic year comes to a close on some notable high notes, while the year in review offered some challenges to our team in civil, architectural and environmental engineering.

Students and activities are BACK! The cover of this edition of the *Bridge* highlights our Steel Bridge Team's performance, but exemplifies the activity and spirit of our student body overall. The bridge team is off to national competition later this month (see page 20) after a dominating performance at Iowa State in April, winning awards in every category. The Concrete Canoe Team also had a strong showing, with the top score in the products category (the canoe), but unfortunately did not advance and did not get to race at Iowa State due to the weather. Our Miner teams also won the ASCE Daniel Mead Ethics Essay with the collaborative essay by **Lorelei Wilson**, **Audrey Powell** and **Alexander Baylor**. The ASCE Student Chapter also overall received the Most Distinguished Chapter Award (see page 21) in Region 7, among the 26 student chapters across seven states. Our students set the pace in many ways on the S&T campus, from **Ben Strattmann**, who is an All-American in football, and **Joe Nickell**, a conference pole vault champion (see page 18), to **Brenan Pool** being named to the Governor's Student Leadership Forum (see page 9), our CArEE Miners set the bar for student activity and leadership at S&T. This May we will confer 136 degrees to new Miner alumni who will continue the legacy that started 150 years before this academic year.

The CArEE faculty also had a great year, with a wide array of notable accomplishments and awards nationally and across the S&T campus (see pages 4-6, 15). Six faculty members were noted as having the most international recognition and impact in a study of worldwide faculty and researchers (see page 4). Collectively the CArEE faculty reached a goal of $5M in externally funded research performed at S&T, which is almost double the $2.7M of five years ago. The reputation and legacy of the CArEE department was also reaffirmed with the *U.S. News* rankings, which included the civil engineering undergraduate program as the top-ranked engineering program among Missouri public university programs, and the 21st best civil program in public universities in the U.S.!

The contributions and accomplishments of our amazing Miner alumni should also be celebrated. Our Rolla team appreciated the strong representation and participation of our alumni, demonstrating the career excellence we expect of Miner alumni. This edition of the *Bridge* is filled with alumni participation and giving back. The Academy of Civil Engineers had a great turnout for the 50th anniversary with new members initiated and young alumni excellence recognized (see pages 10-14). I'll draw particular attention to **Marsia Geldert-Murphey** as she is currently up for election as ASCE President (page 8). Marsia is among the most supportive for our S&T students, usually visiting at least once a semester (four times this year) to inspire our future Miner alumni about topics ranging from starting new engineering firms to speaking to congress for our profession or running for election to a national office of leadership. So do GET THE VOTE OUT by the deadline June 1 (**asce.org/VoteNow**) if you are an ASCE member. Jump on our social media networks to help spread the word to peers and colleagues and support our amazing alumna, who certainly is and will be setting the example of how our Miners #ChangeTheWorld! I applaud the entire team of students, staff, faculty and alumni and deeply appreciate the exceptional efforts. I find it tremendously humbling and gratifying to see the strength and dedication of our team to our motto of Change the World! Go Miners!

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facebook.com/MissouriSandTCArE

twitter.com/SandT_CArE

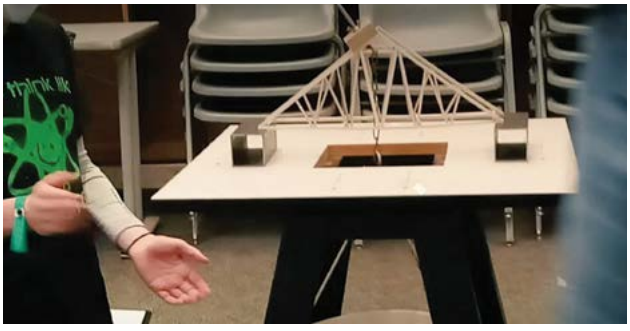
linkedin.com/school/missouri-s-t-civil-architectural-and-environmental-engineering

DEPARTMENT ADMINISTRATION

Department Chair
Joel Burken, Ph.D., P.E., BCEE, F.AEESP

Assistant Chairs
Civil: Eric Showalter, Ph.D., P.E.
Architectural: Stuart Baur, Ph.D., A.I.A.
Environmental: Mark Fitch, Ph.D.
Graduate Programs: Cesar Mendoza, Ph.D.

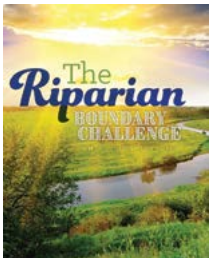
MINERBEARS HOST REGION VII SCIENCE OLYMPIAD BRIDGE COMPETITION IN SPRINGFIELD



Our MinerBears down in Springfield, Mo., had a great experience hosting the bridge competition at the 2022 Region VII Science Olympiad held on the Missouri State University (MSU) campus in February.

Dr. Tamera S. Jahnke, the dean of MSU's College of Natural and Applied Sciences, visited the bridge station and struck up many conversations with middle school to high school students. There was a lot of positive energy and inspiring designs. Breaking bridges is always fun when the aim is to test them and make the designs better.

ELGIN PROPOSES RIPARIAN BOUNDARY CHALLENGE



Boundaries — however convenient, and as natural, visible, substantial, and inviting as they are for governments, treaties, and owners, have one huge, troublesome characteristic — they move!

Dr. Richard Elgin, retired adjunct professor of civil engineering and a member of the Missouri Society of Professional Surveyors, has issued a challenge called *The Riparian Boundary Challenge*. It is a request for each state to develop its own manual that addresses its riparian and littoral boundary location principles.

This has been done for only two states — Arkansas and Missouri. (That's because Dr. Elgin has written extensively on the subject for these states.) It would be a herculean task. That's why no one has done this to date. The "challenge" was somewhat made in jest, but posing the questions/situations is not. They illustrate just how complex riparian boundaries can be, and how state specific they can be.

Learn more: amerisurv.com/2021/10/12/the-riparian-boundary-challenge

The Bridge

In this issue

S&T LANDS ON LIST OF BEST COLLEGES IN AMERICA

by Stacker

Earning a college degree is an investment with far-reaching benefits. Adults who hold degrees earn an average of $32,000 more per year than those who hold a high school diploma. This increased income can mean a big difference in quality of life, from being able to afford a home to lower instances of poverty, and even longer life expectancy.

While those statistics are all good reasons to go to college, education often comes with a hefty price tag. Over the last 10 years, tuition rates for both public and private colleges have increased by more than 25%, and student loan debt has increased alongside them. In 2019, the average cost per year of a private college education was $48,510, while at a public college it was $21,370. As a result, many students are choosing to attend a public university, where they can potentially get less expensive tuition and better value for their money.

Public universities, which are funded by government monies, are usually less expensive than their private counterparts, primarily because they do not have to rely solely on tuition fees to stay solvent. And while there is a long-standing assumption that a private school education is somehow "better" than a state university, state schools often provide the same types of degrees as private ones, and depending on the student, can sometimes provide a better fit for their education.

#72. MISSOURI S&T

- Location: Rolla, Mo.
- Students: 5,692
- Acceptance rate: 79%
- Graduation rate: 66%
- Student to faculty ratio: 18:1
- Median earnings six years after graduation: $71,200
- Employment rate two years after graduation: 95%

Stacker, a virtual newsroom highlighting interesting trends, history, and current news by contextualizing data and offering authoritative analysis, compiled a list of the best public colleges in America using 2021 data from Niche. Niche ranks schools based on a variety of factors including academics, admissions, cost and student life.

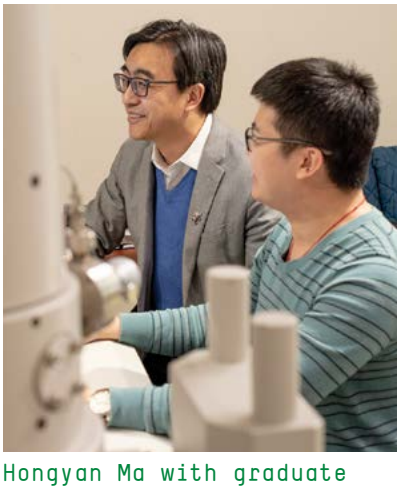
Researchers among top 2% in their fields

Dr. Genda Chen, **Dr. Kamal Khayat**, **Dr. Hongyan Ma**, and **Dr. William Schonberg** were listed among the top 2% of worldwide researchers in their fields for career impact. This collective group of four represents the highest number of faculty in any department on campus that received this honor in 2020 based on their number of research publications, citations and other measures of research productivity.

Career-long data was updated through the end of 2020 and the selection was based on the top 100,000 researchers as determined by a composite citation metric known as a "c-score" (with and without self-citations) or by their percentile rank of 2% or above.

In addition, two other CArEE faculty members — **Dr. Mohamed ElGawady** and **Dr. Dimitri Feys** — were recognized for their single-year impact according to the same analysis.

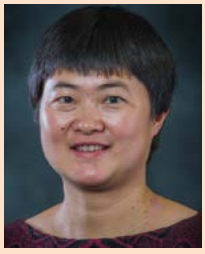
See all the top faculty listed:
news.mst.edu/2021/12/64-researchers-affiliated-with-missouri-st-among-top-2-in-their-fields



Hongyan Ma with graduate student, Wenyu Liao

CAREE FACULTY AWARDED KUMMER IGNITION GRANTS


Genda Chen


Jenny Liu

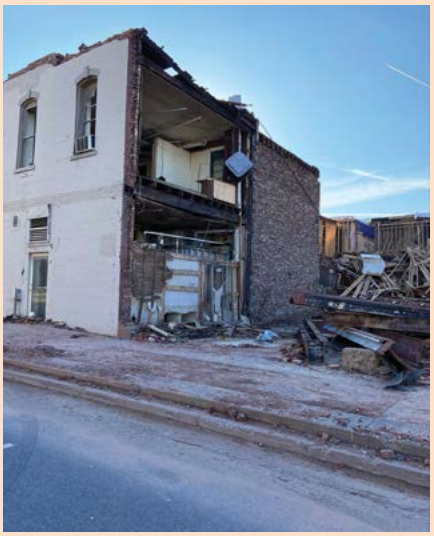

Bob Wu


Grace Yan

CArEE faculty team members **Dr. Genda Chen**, **Dr. Jenny Liu**, **Dr. Chenglin "Bob" Wu** and **Dr. Guirong "Grace" Yan** received four out of the 12 new Kummer Ignition Grants for Research and Innovation awarded during the inaugural competition held in 2021 at Missouri S&T. That is the highest number of awards given to any one department on campus.

Each initiative represents a significant effort to develop a research team in S&T's strategic areas and pursue large-scale proposal opportunities from externally funded sources. This dynamic group of CArEE faculty members will share their projects, vision and leadership to help achieve future success toward this campuswide initiative.

Read the full story: news.mst.edu/2022/01/300-million-gift-sparks-kummer-ignition-grants-program-at-missouri-st



YAN VISITS TORNADO SITES

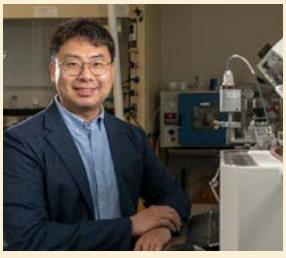
After the Midwest tornado outbreak in early December, **Dr. Grace Yan**, associate professor of structural engineering, visited tornado damaged sites with an IN-CORE Center team led by Dr. John van de Lindt, along with colleagues from the National Institute of Standards and Technology (NIST) and the Federal Emergency Management Agency (FEMA).

The team drove street by street with 360-view cameras in Mayfield, Dawson Springs, Princeton, Hartford, Centertown and Bremen, Ky. They also visited Edwardsville, Ill., Leachville and Monette, Ark., as well as Samburg, Tenn.

The devastation left no doubt about the vulnerability of Central and Southeastern regions in the U.S. to tornadoes and prompted an urgent need in developing and enforcing tornado-resistant designs for civil structures.

Faculty honored for outstanding teaching, experiential learning

Missouri S&T celebrated faculty excellence at an awards banquet held in December 2021.
Learn more: https://bit.ly/3wK10On



FACULTY RESEARCH AWARDS

- **Dr. Islam El-adaway and Dr. Chenglin Wu**
  Faculty Research Awards recognize faculty members who have demonstrated excellence in research and scholarship.

FACULTY ACHIEVEMENT AWARD

- **Dr. Eric Showalter**
  Faculty Achievement Awards recognize non-tenure-track faculty who have demonstrated sustained excellence in at least one of the following areas: teaching, research or service.

FACULTY EXCELLENCE AWARD

- **Dr. Grace Yan**
  Faculty Excellence Awards recognize faculty members who have demonstrated sustained excellence in teaching, research and service. Only five are awarded annually at S&T.

OUTSTANDING TEACHING AWARD

- **Dr. Hongyan Ma**
  Outstanding Teaching Awards recognize faculty based on their end-of-course evaluation scores for academic year 2020-21.

Feys named to ACI executive board

Dr. Dimitri Feys, associate professor, was elected president of the 2022 Missouri Chapter of the American Concrete Institute (ACI) Executive Board. The Missouri Chapter of ACI is dedicated to furthering engineering and technical education; scientific investigation and research; and development of standards for design and construction of concrete structures.

Learn more: acimissouri.org/board.php

Oerther appointed trustee of sanitarians academy

Dr. Daniel B. Oerther, professor of environmental health engineering, has been appointed a trustee of the American Academy of Sanitarians.

Founded in 1956, the academy elevates the standards, improving the practice, advancing the professional proficiency and promoting ethical conduct among professional sanitarians in every field of environmental health.

As a trustee, Oerther shares joint responsibility for governance and fiduciary management of the academy, which includes providing leadership to nearly 750 diplomats of sanitary practice who have responsibility to protect the public from threats to environmental health.

ST. PAT'S 2022

Missouri S&T held its 114th annual St. Pat's celebration in person this March. Each year, the people of Missouri and their friends are invited to Rolla to join the students, faculty, and staff to pay homage to the patron saint of engineers and to join in the celebration that has become known as The Best Ever.

Missouri DNR Director shares vision

Missouri Department of Natural Resources (DNR) Director Dru Buntin shared his vision for improving the quality of life for Missourians through preserving and protecting the state's natural resources. He also discussed activities and opportunities in which DNR could partner with Missouri S&T.

Governor Mike Parson appointed Buntin as DNR director in August 2021. Buntin had previously served as DNR deputy director twice, from 2009-2012 then again starting in May 2017. Since rejoining DNR, he has led several river-related efforts, including drought relief and flood recovery. The seminar was co-hosted with the Center for Research in Energy and Environment (CREE).

Website: cree.mst.edu/seminars

Queens & Knights

Congratulations to those from our department who were selected as 2022 Queen of Love and Beauty candidates:

- **Megan Baris**, a senior in architectural engineering from Chesterfield, Missouri, representing the Miner Theatre Guild
- **Lindsey Carvalho**, a senior in environmental engineering from Kirkwood, Missouri, representing Kappa Alpha Order
- **Kristen Clevenger**, a junior in architectural engineering from Kansas City, Missouri, representing Beta Sigma Psi
- **Emily Collins**, a senior in architectural engineering from Grover, Missouri, representing Kappa Delta
- **Alicia Davis**, a senior in environmental engineering from La Monte, Missouri, representing Lambda Chi Alpha
- **Jessica Kite**, a senior in civil engineering from St. Charles, Missouri, representing the Student Union Board (SUB)
- **McKenzie Ruff**, a senior in environmental engineering from Union, Missouri, representing Delta Sigma Phi.

Congratulations to those from our department who were selected as 2022 Student Knights of St. Patrick:

- **Henry Skouby**, a senior in civil engineering from Troy, Missouri, representing Beta Sigma Psi
- **Takoda Smarr**, a senior in civil engineering from Fenton, Missouri, representing Concrete Canoe Design Team
- **Katie Thompson**, a senior in civil engineering from Kansas City, Missouri, representing Kappa Delta.

Geldert-Murphey poised to become ASCE's 2023 president-elect

ASCE's Board of Direction Nominating Committee has selected **Marsia Geldert-Murphey**, MS CE'97, as one of two recent directors to be nominated for ASCE 2023 president-elect. ASCE members can cast their vote through June 1 at **asce.org/VoteNow**.

Geldert-Murphey specializes in transportation and geotechnical engineering. She currently works for Lochmueller Group, a Midwestern consulting firm, where she is the regional director for the states of Missouri and Illinois. She has three decades of experience in civil engineering and construction.

Marsia Geldert-Murphey

Marsia is a member of the Academy of Civil Engineers and speaks to the ASCE student chapter and senior seminar at least once a year and is an active leader and participant in the CArEE Department Leadership Workshop, hosted by women leaders of the academy. She is one of Missouri S&T's most active alumnae.

An ASCE member since 1990, Geldert-Murphey is the current chair of the Public Policy and Practice Committee. She served on the ASCE Board of Direction from 2016-2019 as the Region 7 director. Her extensive ASCE activities includes service on several Society-level committees such as program and finance, leader training, and diversity and women, as well as serving as a mentor. She also led the St. Louis Section as president in 2006.

"I have had the honor and privilege of providing service to ASCE in a variety of ways on student chapter, geographic unit, and society levels," Geldert-Murphey said in her nominee's vision statement.

"My vision of service as the leader of ASCE truly is in alignment with the Society's purpose, vision, mission, and strategic goals. I believe ASCE must focus not only on the value we bring to our members but also on the ease and simplicity with which that value is conveyed, received, navigated and experienced."

Get to know Geldert-Murphey

The American Society of Civil Engineers has been an important part of Geldert-Murphey's life since she was a college student and continues to influence her development as a civil engineer, both technically and professionally.

She has had the honor and privilege of providing service to ASCE in a variety of ways on student chapter, geographic unit, and society levels, and has developed lifelong friendships, mentoring relations, and a vast international professional network. She brings to ASCE her experience as both a technical expert and a successful entrepreneur.

In addition to co-founding and building an engineering consulting firm from start-up to $8M in revenue in five years, she has also been responsible for the structural geotechnical designs for major river crossings in the Midwest. Her experience in business and complex engineering projects provides a perspective shared by many ASCE members.

Her vision of service as a leader of ASCE truly is in alignment with the Society's purpose, vision, mission, and strategic goals. In fact, her vision is as easy as A-S-C-E:

A – Advocacy
S – Service
C – Competence
E – Engagement

Advocacy manifests in many ways including supporting members, communities served, and public policies that advance the profession and mission of ASCE to promote the health, safety and welfare of all member communities.

Service is the cornerstone of ASCE. Society members give their time, ideas, and energy to form a strong community and to achieve the vision of a better quality of life for all. Service has always been an important part of her DNA, and she celebrates the opportunity to work with fellow members and staff as they continue to serve the public.

Competence is achieved through the ability to continue to improve technical expertise. Engineering competence and excellence are championed by nine specialty institutes and numerous technical groups. Competence is exhibited in ASCE's strategic goals for advancing educational and professional standards for civil engineers.

Engagement is a superpower at ASCE. A network of ideas, comradery, experience and expertise is a rising tide that lifts all boats. Engagement of members allows integration of great ideas, experiences, and knowledge into powerful and creative engineering solutions and continuous technical and professional development.

Geldert-Murphey believes ASCE must focus on the value it brings to its members and build an even stronger brand through improved visibility to become the go-to resource for communication, tools, skills development, and legacy.

The use of communication tools as well as social media must remain effective and up-to-date; ASCE should follow the example of future leaders — today's younger members and students — and evolve to amplify its relevance in a rapidly changing world.

Geldert-Murphey respects everyone's unique path and celebrates the mosaic of membership. If elected, she will humbly endeavor to serve the profession in a manner that earns respect, strengthens the organization and expands ASCE horizons.

Website:
www.asce.org/about-asce/elections/marsia-geldert-murphey

Brenan Pool

Pool attends governor's leadership forum

Brenan Pool, a senior in civil and architectural engineering, was among a group of students selected to attend the 2022 Missouri Governor's Student Leadership Forum, an offshoot of the National Student Leadership Forum — held Feb. 25-27 in Jefferson City, Mo.

Since 1986, the Missouri Governor's Student Leadership Forum (#MissouriGSLF) has been convened by Missouri's Governor and other prominent community leaders and invites young people of diverse backgrounds and aspirations to put aside their differences and learn together how to better lead in their spheres of influence.

"The conference was inspirational and important to my spiritual and professional growth. It was a great honor for me to represent a group of leaders, and it helped me work on growing my networking and professional skills," says Pool.

Learn more: www.missourigslf.com.

Urushidani featured S&T-ASCE speaker

Saki Urushidani, EnvE'16, returned to campus as a featured speaker for a S&T ASCE student chapter meeting in February. She is an active member of the ASCE Members of Society Advancing An Inclusive Culture (MOSAIC) national committee and works as an environmental engineer for the City of Springfield.

Learn more: https://bit.ly/3suNNY3


Saki Urushidani

S&T Academy of Civil Engineers

2022 Inductees

50 YEARS

CELEBRATING EXCELLENCE

Academy Awards 2022

The Missouri S&T Academy of Civil Engineers celebrated 50 years of excellence and 150 years of civil engineering on the Rolla campus at a recent event honoring several awardees.

Dr. Joseph Senne Award for Achievement in Teaching and Service

Dr. Jeff Thomas, teaching professor

Thomas teaches various foundational engineering and structural engineering courses, primarily at our cooperative program with Missouri State University in Springfield, Mo.

Dr. Joseph Senne Award for Scholarly Achievement

Dr. Chenglin "Bob" Wu, assistant professor

Wu published 22 journal articles in the last three years and received an S&T research award in 2021. Most notably, Wu Received a National Science Foundation CAREER Award in 2021 to support his research in 2D metals. In 2022, Wu won a Dean's Scholar Award and a S&T Faculty Research Award.

Academy Exemplary Young Alumni Award

Nichole Witushynsky, ArchE'08, MS CE'11

Nichole is a bridge design engineer and senior consultant with WSP in St. Louis, where she works in multiple states performing bridge design and rehabilitation design. Nichole enjoys using volunteer opportunities to help young future engineers, such as mentoring with Engineer for a Day and helping ASCE — Future City, Kansas Science and Engineering Fair, S&T's Steel Bridge Team, and NAWIC Block Kids.

Dane Shaw, CE'11, MS CE'13

Dane worked as a structural engineer and certified bridge and tunnel inspector for five years at Jacobs. After a short stay with McClure Engineering, Dane joined Ameren Missouri in spring 2018. Dane is a project manager supporting execution of Ameren's smart-energy plan with a portfolio of projects across Missouri. He has been very active in giving his time to S&T and CArEE and serves as Missouri president of American Concrete Institute (ACI).

Neil and Maurita Stueck Outstanding Senior Achievement Undergraduate Student Award

Michael J. Winner, CE May 2022

- Chi Epsilon Honor Society, ASCE
- Greenberg Scholar
- Interned with Millstone Weber and Horner & Shifrin
- Lead Designer for Steel Bridge Team and TA for Mechanics of Materials
- Maintained a 4.0 and after graduation will work for ABNA Engineering.

Evan Bergmann, CE May 2022

- Interned with Great River Engineering — City of Branson
- Science Olympiad volunteer
- S&T Student Ambassador Missouri State's Cooperative Engineering Program
- Student member of Missouri Society of Professional Engineers and Ozarks Chapter of the Institute of Transportation Engineers
- American Society of Civil Engineers (ASCE) and American Institute of Steel Construction (AISC)
- Volunteer with Missouri Stream Team
- Science Olympiad volunteer

Anisa Ripp, CE May 2022 (pre-law minor)

- Interned with Whiting-Turner and Missouri Department of Transportation
- Served as officer of the S&T Student Union Board
- Served as officer of Society of Women Engineers
- Student ambassador of S&T admissions
- Lead peer involvement advisor
- Missouri S&T Concrete Canoe Paddle Team captain
- Chi Epsilon member and officer

Outstanding Support Staff Award

David Basford

David is responsible for department accounting, budgeting and appointments. Since his start in the department in 2019, he has performed well above expectations under a heavy load in his office support assistant role.

Photos by Andrew Layton

Nichole Witushynsky

Dane Shaw

Michael J. Winner

Evan Bergmann

Anisa Ripp

Nine new academy members inducted

Nine professionals with ties to Missouri S&T were inducted into the S&T Academy of Civil Engineers during an induction ceremony held Thursday, April 7, in Rolla. The academy recognizes outstanding alumni for their professional achievement and success. It also provides support and experience to help the civil, architectural and environmental engineering department at Missouri S&T to reach its collective mission and values.

New members are:

Scott Cole

Scott Cole of Fort Worth, Texas, vice president and principal for Freese and Nichols Inc., earned a bachelor's degree in civil engineering from Missouri S&T in 2001, followed by a master's degree in engineering management from the University of Kansas. Cole leads a team of over 100 engineers, scientists, and technical professionals for the 127-year-old full-service engineering firm. He has led more than 100 water and wastewater projects including hydraulic studies, master plans, capital improvement plans (CIPs) and cost recovery studies and is a nationally recognized specialist in water system modeling and a member of the American Water Works Association's (AWWA) Engineering Modeling Applications Committee that establishes standards for hydraulic modeling. Cole, who co-authored AWWA's "M32 Computer Modeling of Water Distribution Systems" manual, has conducted hydraulic model workshops for utilities across the United States and presented over 40 technical papers at various conferences and seminars. He is a licensed professional engineer in Arkansas, Colorado, Florida, Georgia, Missouri, Oklahoma, North Carolina and Texas.

Kim Curry

Kim Curry of Kansas City, Missouri, senior associate civil engineer for Burns & McDonnell, earned a bachelor's degree in civil engineering from Missouri S&T in 1986. Since joining Burns & McDonnell, Curry has enjoyed growing her career from a civil engineer to a transportation engineer managing and designing highly visible regional highway projects, including two-lane rural highways, expressways and freeways. Her experience has provided opportunities to participate in innovative designs, such as the first roundabout and the first diverging diamond interchange on the Kansas highway system. She is currently using her experience serving as the program manager consultant's engineering manager for the Kansas Department of Transportation's Eisenhower Legacy Transportation Program. Curry uses her time and talents to encourage and mentor students in STEM activities partnering with ASCE, Burns & McDonnell and the Women's Transportation Seminar (WTS). She also volunteers for professional and community-based organizations and was recently named WTS Kansas City Chapter's 2020 Member of the Year. For her many efforts, Kim received the Greg Graves Community Leadership Award in 2016.

Shawna L. Erter

Shawna L. Erter of St. Charles, Missouri, vice president of geotechnical engineering for SCI Engineering Inc., earned a bachelor's degree in geological engineering with a geology minor in 2000 and a master of engineering degree in geotechnical engineering in 2003, both from Missouri S&T. She earned Diplomat of Geotechnical Engineering certification in 2019. Erter has worked for SCI Engineering Inc. for more than 20 years. She was named ASEE's St. Louis Section Outstanding Younger Member in 2005 and was part of the Geotechnical Institute Section named 2019 Best Chapter. In 2020, she was one of CNR's Top 20 Women in Construction, and received MSPE's 2021 Outstanding Engineer in Private Practice Award. Erter chaired Younger Member group and Geo-Institute St. Louis Section committees, served as 2014-15 St. Louis Section Board president, was a member of the Geo-Institutes Site Characterization and Ground Modification Committee, and was Region 7 governor. Erter was named fellow in 2019. She serves on the ACEC Missouri board, the National ACEC Executive Committee for Geoprofessionals, two Geoprofessional Business Association (GBA) committees and was part of the task force to elevate the profession. She is active in the HBA and APWA St. Louis. A registered professional engineer in over 20 states, Erter conducts geotechnical investigations and evaluations, supervises geotechnical and construction projects, authors and reviews geotechnical reports, and provides technical guidance to staff across the Midwest. In 2010, she was project manager for the Patients First Hospital addition, which

won the ACEC Engineering Excellence Award, and she has worked on some iconic St. Louis landmarks, including the Gateway Arch, Ballpark Village and the National GeoSpatial Agency.

R. Scott Goehri

R. Scott Goehri of Olathe, Kansas, retired senior vice president and transportation professional services director of HDR Inc., earned a bachelor's degree in civil engineering from Missouri S&T in 1983. He also earned master of arts degrees from Webster University in business management and computer resources management. Goehri began his career at the Missouri Pacific Railroad and Union Pacific Railroad before moving on to Sverdrup Corp., Intergraph Corp., and finally HDR. He is a recognized national leader in his field and served in multiple board, officer and committee roles in the American Railway Engineer and Maintenance of Way Association, National Railroad Contractors and Maintenance Association, the American Association of Railroads, and the Railroad Transportation Engineering Advisory Board at Penn State, Altoona. He is a member of ASCE, the National Society of Professional Engineers, American Railway Developers Association, and American Shortline Railroad Association. Goehri has been honored by ASCE with two certificates of appreciation and by HDR as the Transportation Project Manager of the Year in 2008. He has received many HDR Pathfinders awards, a recognition by his peers at HDR, including a Crystal Award for work he completed in Tanzania in association with the BNSF railroad. He also served as director for Fluor/HDR Global Design Consultants LLC focusing on design-build transportation projects with construction values over $500M. In 2014 the National Railroad Contractors and Maintenance Association elected him to its national board. Goehri worked on legislation related to railroad transportation infrastructure and has given lectures and professional chapter talks at S&T and for other university students.

Thomas Gredell

Thomas Gredell of Jefferson City, Missouri, founder and president of GREDELL Engineering Resources Inc., earned bachelor's and master's degrees in civil engineering from Missouri S&T in 1978 and 1980, respectively. He began his career at the Missouri Department of Natural Resources as a staff solid waste permit engineer and left as chief of the solid waste engineering section, then went to work for Environmental Concepts Inc. (ECI) advancing to vice president before Barr Engineering bought ECI in 1998. In 2001, he formed Gredell Engineering, which continues today. In 2014, Gredell joined his two brothers as co-owner and vice president of Vista Manufacturing Co., a precision manufacturing, machining and electronics assembly company in Kansas City, Kansas. He has held positions of committee chair, officer and board member in the Jefferson City Chapter of Missouri Society of Professional Engineers, the Missouri Waste Control Coalition, and American Council of Engineering Companies-Missouri. He is also active in the Jefferson City Chamber of Commerce, the East Side Business Association and Missouri Conservation Federation. MSPE's 1984 Young Engineer of the Year, he supports registration and licensure and follows the activities of the Missouri Legislature as a member of MSPE and ACEC-MO. At S&T, Gredell was an officer in Kappa Sigma fraternity and he has served on its alumni house corporation since the early 2000s. Gredell Engineering designed the civil site plan for the 2011 house renovation. He was a member of Phi Eta Sigma, Tau Beta Pi and Theta Tau Omega and was named freshman of the year. He played basketball his freshman year when the 1975-76 team won the MIAA conference championship and earned a berth to the NCAA Division II Tournament. The team was inducted into the Miner Athletics Hall of Fame in 1999.

Kristen Leathers-Gratton

Kristen Leathers-Gratton of Overland Park, Kansas, president of Affinis Corp., earned a bachelor's degree in civil engineering from Missouri S&T in 1990. She has spent her entire career at Affinis Corp., formerly part of Larkin Associates. In 2019, and was named president of the 40-person civil engineering and surveying company. Her career has focused on design and construction management of municipal streets and stormwater drainage projects. Working mostly for municipal clients, she helps neighborhoods find new life and solve problems that improve the quality of life for those residents. Leathers-Gratton is active in a number of professional and civic organizations including the American Council of Engineering Companies in Missouri serving on its board of directors and the Transportation and Kansas City Liaison committees. She is also a member of American Public Works Association, Kansas Society of Professional Engineers, Overland Park Chamber of Commerce's Public Policy Committee and the Engineer's Foundation of Kansas board, which focusses on fundraising for STEM-related programs. She also serves on the local leadership board of the greater Kansas City chapter of the American Lung Association. In 2021 she was recognized in the *Kansas City Business Journal's* 20 To Know in Engineering, and she is enrolled in the Greater Kansas City Chamber of Commerce Centurion's program.

(continued on the next page)

Nancy Matteoni

Nancy Matteoni of Florissant, Missouri, project principal at Parsons Corp., earned a bachelor's degree in civil engineering from Missouri S&T in 1990. She began her career with Sverdrup/Jacobs Engineering Group as a bridge engineer, moved to Horner & Shifrin as a senior structural engineer and finally to Parsons Corp., ascending to her current role as project principal. Some of Matteoni's notable projects include MoDOT's "New I-64 Project," the Indiana Toll Road 80/90, the I-70 DB in Columbia, Missouri, SH183 Managed Lanes DB in Dallas, the Hurricane Deck Bridge Replacement in Camden County, Missouri; and her work on the Deer Creek Sanitary Systems projects for the Metropolitan St. Louis Sewer District, which includes a large water storage tunnel and pump station. Her work on this tunnel was highlighted in the December 2019 issue of *Missouri S&T Magazine*. Matteoni mentors prospective female students through school programs, scouts and job shadowing. She has been active in the Boy Scouts of America since 2011.

Dr. Jeff Neemann

Dr. Jeff Neemann of Irvine, California, area director and associate vice president of Black & Veatch, earned a bachelor's degree in civil engineering in 1996 and a master's degree in environmental engineering in 1998, both from Missouri S&T, then earned a Ph.D. in civil engineering from the University of Kansas in 2016. Since joining Black & Veatch in 1998, he has been known for his technical expertise, mentorship of younger professionals, leadership in expanding business offerings, and focus and responsiveness to clients. In the water and wastewater world, Neemann is a known leader in research and applications of novel approaches that have seen wide adoption, such as the use of chlorine and ammonia prior to ozonation to reduce bromate formation. He served as president of the International Ozone Association, co-inventor on patents, and his role as a frequent speaker and moderator at events around the world.

CHANGING THE WORLD

Dave Vonarx

Dave Vonarx of Hillsboro, Missouri, president and owner of VonArx Engineering Inc., earned a bachelor's degree in civil engineering from Missouri S&T in 1989, and a master's in civil engineering from Purdue University in 1993. He started his civil engineering career with the Indiana Department of Engineering and returned to the St. Louis area in 1993 to specialize in site development, transportation, storm water, and structural design consulting. As an engineering entrepreneur in South County and Jefferson County, Vonarx has faithfully served municipal, institutional and private clients in the region for three decades. He is a member of ASCE and the Engineers Club of St. Louis and is an associate member of the Southern Gateway Association of Realtors. Vonarx has also been active at S&T since graduation. He is a member of the 1985 men's cross country team, which was inducted in to the S&T Athletics Hall of Fame, and he currently serves as president-elect of the S&T Academy of Miner Athletics. He chaired the inaugural event for the Mullin/Elmore Leadership in Athletics speaker series that brought Olympian and Boston Marathon champion Des Linden to campus in November 2021, and he routinely returns to the S&T campus to participate in alumni events.

CArEE student leaders

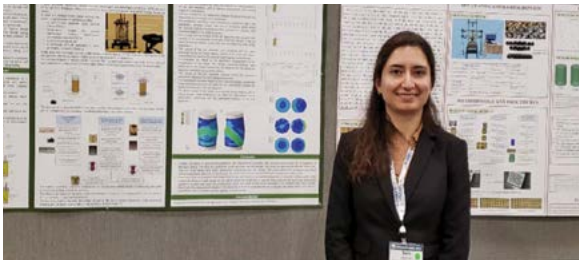
At Missouri S&T student leadership is an integral part of our student success. Exemplary leadership by our alumni is a key component to SHOWING our students how leaders develop and career paths are imagined. We are very grateful our academy members make a concerted effort to return to Rolla and engage with our student leaders and create a climate of mutual collaboration, engagement and accountability… teaching how we **Change the World**!

Bringing insight in construction

Dr. Jenny Liu, professor of materials and pavement engineering, was invited to give two presentations titled "Preliminary Study of HDPE Modified Asphalt" and "Integrating Quality Assurance in Balanced Mix Design for Durable Mixtures" during the CI&CRC Joint Conference held in Arlington, Va., March 9-12.

ASCE's Construction Institute (CI) and Construction Research Council (CRC) joined forces to bring the latest insight in construction from the academic community and industry professionals. As the chair of ASCE's Bituminous Materials Committee (BMC), Liu also chaired one BMC sponsored technical session and the committee meeting during the conference.

Learn more: cisummit-crc.asce.org



Ph.D. student showcases work at 2022 Geo-Congress Conference

Dr. Xiong Zhang and **Sara Fayek**, a Ph.D. student in civil engineering, presented four posters at the Geo-Congress in Charlotte, N.C., March 20-23, 2022.

The posters showcased their recent work on modeling and testing of geomaterials with innovative methods and techniques. These presentations included: "Consideration of One Camera Photogrammetry-Based Method to Reevaluate Some Aspects of Conventional Triaxial Methods"; "Use of Low-Cost Security Cameras to Measure the Volume Changes of Unsaturated Soils during Triaxial Testing"; "Using a Three-Dimensional Hydro-Mechanical Model to Study the Cyclic Behavior of Unsaturated Soils" and "Using the Modified State Surface Approach to Explain and Simplify the Clay and Sand Model (CASM)."

Learn more: www.geocongress.org.

Researchers present at TRB meeting

Faculty and civil engineering students presented their research at the Transportation Research Board's (TRB) 101st annual meeting, held in Washington, D.C., in January. Participating faculty members included **Dr. Jenny Liu** and **Dr. Xiong Zhang**. The group gave 14 presentations, including poster sessions and committee meetings. Research topics included innovative materials, advanced testing and modeling, and data analytics for sustainable transportation systems.

The annual meeting consists of more than 400 sessions and workshops addressing topics of interest to policy makers, administrators, practitioners, researchers, and representatives of government, industry and academic institutions.

Weiland talks to Chi Epsilon chapter

John Weiland, CE'97, MS CE'04, senior manager for Wade Trim, president of the ASCE St. Louis Section and treasurer of the Engineers' Club of St. Louis, spoke with student members of Chi Epsilon, the National civil engineering honor society, in regards to his experience in wastewater, stormwater and construction management projects.

CAREER FAIR AND NETWORKING EVENT

Incorporating feedback from the past several semesters, Missouri S&T's career opportunities and employer relations (COER) team hosted the university's spring 2022 career hybrid fair virtually on Tuesday, Feb. 15, and in-person on Wednesday, Feb. 16, at the Gale Bullman Building. Prior to the fair, students download the Career Fair Plus app to browse the more than 280 companies that attended.

"Both the volume and the quality of the employers participating in this spring's career fair were a testament to the demand for S&T students and graduates as they enter the job market," says **Dr. Will Zwikelmaier**, director of COER. "Missouri S&T is fully committed to supporting our students as they launch their careers, and we'll continue to refine and enhance our fairs based on what we learn from participants."

More than 30 companies attended the department networking event on the Monday evening before the fair. It was a great opportunity for them to connect and visit with our students in a more relaxed setting. Here are a few that were in attendance: ABNA, American Buildings (Nucor), Barr, Burns & McDonnell, Ceco Concrete Construction, Crawford, Murphy, & Tilly, Freese Nichols, Garver, GBA, Golder/WSP, Gonzalez Co., HDR, Howe Co., HR Green, JE Dunn, Kiewit, Kimley Horn, Lochmueller Group, Marathon Petroleum Co., MoDOT, Navy, Olsson, Patrick Engineering, Roanoke Construction, Terracon, Traylor Bros. and Wallace.

NAE member presents behind the scenes look at Iowa Flood Center

The Center for Infrastructure Engineering Studies (CIES) welcomed **Dr. Witold Krajewski**, the Rose and Joseph Summers Chair in Water Resources Engineering at the University of Iowa, in February for a research seminar.

In 2009, Krajewski was appointed Director of the Iowa Flood Center and in 2021, he was elected to the National Academy of Engineering.

During the seminar, Krajewski talked about the science and technology behind the Iowa Flood Center, which was created at the University of Iowa in response to the devastating flood of 2008. Discussion topics included technical design considerations of bridge sensors, workflow to create a large set of inundation maps, and components of a rainfall-runoff model at the core of the streamflow forecasting system..

Learn more: cies.mst.edu/seminars/drwitoldkrajewski.

Flood control projects discussed

Cory Tabbert and John Vest with the St. Louis District of the U.S. Army Corps of Engineers discussed their work on flood control projects in Arecibo, Puerto Rico, an area that has long experienced devastating flooding. The talk was part of the department's Water Seminar Series.

Pourhassan wins Missouri S&T Three-Minute Thesis competition

Alireza Pourhassan, a Ph.D. candidate in civil engineering from Iran, won first place in S&T's seventh annual Three Minute Thesis (3MT®) competition on March 1.

Pourhassan impressed the judges with his research presentation titled "The Use of Tire-Derived Aggregate for Chip Seal Pavement Construction." He advanced to the regional 3MT competition hosted by the Midwestern Association of Graduate Schools in Milwaukee, where he competed for the chance to present his research at a national competition.

Varuni Abhayaratne, a master's degree student in environmental engineering, was named the runner-up. Abhayaratne's presentation was titled "Use of a Network of Low-Cost Multi-Pollutant Air Quality Sensors to Evaluate Environmental Justice in Twin Cities, Minnesota." The People's Choice Award went to **Sambad Regmi**, a Ph.D. student in mechanical engineering, with a presentation titled, "The Present and the Future of the Physically Interactive Robots."

Additional finalists who competed this year included **Ashley Raster**, a master's degree student in nuclear engineering, and **Ogbole Inalegwu**, a Ph.D. student in computer engineering.

Judges included Rolla community members and S&T employees Shari Hill, Dr. Jossalyn Larson and Doug Roberts. Additional community and campus members were involved in preliminary judging rounds. The 3MT competition originated with the University of Queensland, New Zealand, and is now held annually at over 900 universities worldwide.

L-R: Pourhassan, Regmi, Raster, Abhayaratne and Inalegwu

IACIP Awards

Two civil engineering Ph.D. students, **Hanli Wu** and **Anyou Zhu**, received awards from the International Association of Chinese Infrastructure Professionals (IACIP). Wu is pictured at right with his advisor, **Dr. Xiong Zhang**.

INSPIRE Webinar

The INSPIRE University Transportation Center presented a free webinar with guest speaker Dr. Dongbin Kim, adjunct assistant professor from the Howard R. Hughes College of Engineering at the University of Nevada, Las Vegas, on March 16.

His talk was titled "Toward Dexterous Aerial Manipulation Using Embodied Human-Intelligence For Bridge Inspection and Maintenance."

Kim is the lab manager at Drones and Autonomous Systems Lab. In 2021, he earned a Ph.D. in mechanical engineering from the University of Nevada, Las Vegas, under Dr. Paul Oh, former National Science Foundation (NSF) Robotics Program Director. His Ph.D. research project was to develop a Mobile Manipulating Unmanned Aerial Vehicle (MM-UAV) for bridge inspection and maintenance.

Website:
inspire-utc.mst.edu/webinars

MINER ATHLETES

Straatmann named to D2Football.com's Elite 100 for 2021 season

by John Kean

Missouri S&T linebacker and civil engineering student **Ben Straatmann**, who led all of NCAA Division II in quarterback sacks during the 2021 season, was honored as one of the selections to the D2Football.com Elite 100 squad for the past season.

Straatmann, who set new S&T single season records with 14 quarterback sacks and 24 tackles for a loss during the Miners' 6-5 campaign, also led the team with 92 tackles. His sack average of 1.27 per game was the best in NCAA Division II during the recently completed campaign.

In addition to those marks, Straatmann – a first-team all-conference selection in the Great Lakes Valley Conference in 2021 – also set single-game records for sacks and tackles for a loss during the year when he had five sacks and six stops behind the line of scrimmage in S&T's contest at Quincy. He was named as the GLVC's Defensive Player of the Week following the Miners' season-ending victory at Southwest Baptist after recording a season-high 13 tackles along with 4.5 stops for a loss and 2.5 sacks.

That performance at SBU also earned Straatmann national defensive player of the week honors from D2Football.com.

Straatmann was one of six players from GLVC schools named to the Elite 100 team, which included Lindenwood linebacker Drew Seers – the defensive player of the year – Truman State running back Cory Schrader, Indianapolis running back Toriano Clinton, Southwest Baptist quarterback Cooper Callis and SBU linebacker Coleton Smith.

CArEE Miner athletes reach new heights and break records

Missouri S&T's **Joseph Nickell**, CE'21, and also a master's student in civil engineering, captured the championship in the pole vault to highlight opening day performances of the Missouri S&T track & field teams at the Great Lakes Valley Conference Championships. Nickell cleared 15-5½ to win his first GLVC championship in the event; he had a second place finish at last spring's outdoor meet and in the 2018 outdoor championships. He won the championship after being the only competitor left after making 15-1½, then cleared the next height before bowing out at 15-9¼.

Through the first four events of the heptathlon, **Nick Janke**, a student in civil engineering, was in second place with 2,721 points.

The women's team had two scoring performances which came courtesy of **Jessica Rhoads**, a civil and architectural engineering student, who posted a mark of 51-7 for fifth place.

Mercer competes at NCAA-II Swimming Championships

Jay Mercer, a civil engineering student from Kansas City, Mo., was selected to compete at the NCAA Division II Swimming & Diving Championships, held in March in Greensboro, N.C. Mercer competed in the 200-yard breaststroke and earned his spot based on his time of 1:59.32 this season that is ranked 16th nationally. He also earned USA Swimming Scholastic All-America honors.

Conversation on diversity, equity and inclusion

Eric Potts, CE'73, associate account director at Freese and Nichols Inc., spoke about diversity, equity and inclusion to our students in April.

"Diversity, equity and inclusion should not be looked at as just another initiative," said Potts. "It should be a part of your organization's DNA."

Prior to joining Freese and Nichols Inc., Potts served as deputy director of corporate strategy and performance, planning, design and construction for the Houston Airport System. He also served as interim director of the system, which includes George Bush International, William P. Hobby and Ellington Field airports in Houston.

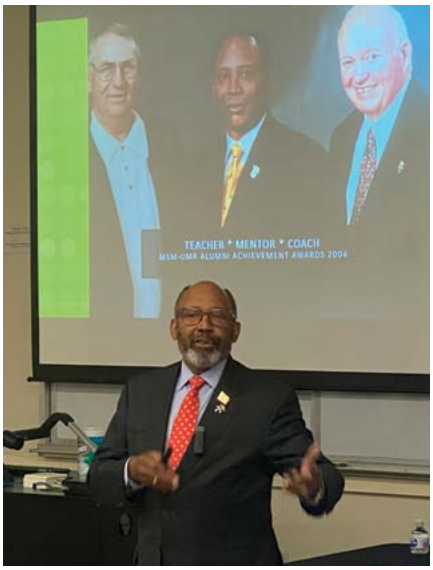
Eric Potts, pictured far right, with CArEE students and Al Kaplan, CE'72

Potts discussed approaches that could build a consensus for equal-opportunity outcomes. He brings 43 years of leadership and management experience to the conversation.

In the business world the idea of change or transition can be a difficult proposal. The tendency to do things a certain way for so long becomes an ingrained habit that is hard to break.

Consider what approaches could build a consensus to the desired outcomes. Call to action only happens when welcomed, respected, included, represented, at home and engaged, and represents the public we serve.

View the conversation:
https://youtu.be/qXY1qJiL9Yg



Every successful professional walks through the door of opportunity. Do you close the door or help someone through?

Future Cities Competition

A group of young students spent a full day sharing their brilliant innovations and competing in the Future Cities Missouri State Championships. St. Clair Missouri's team swept the championship, but it was very close among the top three teams.

The event was hosted by the CArEE Department inside Butler-Carlton Hall and our faculty and alumni served as judges.

Steel Bridge Team wins fourth consecutive regional competition, will compete at nationals

The Steel Bridge Design Team from Missouri S&T recently won first place at a regional American Institute of Steel Construction (AISC) Mid-Continent Student Conference and will now put their bridge engineering and construction skills to the test nationally May 27-28 at Virginia Tech in Blacksburg.

"Our team is proud to have won our fourth regional competition in a row — a streak that started before I joined in 2018 and will hopefully continue for years to come," says team president **Brendan Schmidt**.

Missouri S&T earned first place overall at the event, held at Iowa State University in Ames April 21-25. They also placed first in bridge stiffness, construction speed, structural efficiency and construction economy, second in lightness and cost estimation, and third in aesthetics.

"The team excelled again by defending their championship title despite the discontinuity imposed by Covid," says team advisor **Dr. Nicolas Libre**, associate teaching professor of civil, architectural and environmental engineering. "The award couldn't be achieved without the talent and hard work of the past and present team captains, officers and members. I am so proud of them."

Libre says he also appreciates the continuing support of **Dr. Roger LaBoube**, CE'70, MS CE'73, PhD CE'77, the founding advisor of the Steel Bridge Team. LaBoube is a Curators' Teaching Professor emeritus of civil, architectural and environmental engineering and director of the Center for Cold-Formed Steel Structures.

ABBETT SEMINARS

Structural Health Monitoring

Dr. Ahsan Kareem presented a talk titled, "Structural Health Monitoring: From Virtual Shakers to Machine Learning" in April.

Kareem is the Robert M. Moran Professor of engineering and the director of the NatHaz modeling laboratory at the University of Notre Dame.

Smart City, Infrastructure Technologies

Dr. Necati Catbas presented a talk titled, "Monitoring Technologies for Smart Cities and Civil Infrastructure Systems" in March.

Catbas is the Lockheed Martin St. Laurent Professor in civil, environmental and construction engineering at the University of Central Florida and the founding director of Civil Infrastructure Technologies for Resilience and Safety.

Both lectures were co-hosted by the department and the Center for Intelligent Infrastructure as part of the Distinguished Seminar Series.

Website: cii.mst.edu

ASCE leader shares vision in 2022 Stueck Lecture

From autonomous vehicles to cutting-edge green technologies, the built environment is being reshaped before our eyes. The changes are accompanied by challenges, and **Jerry Buckwalter**, American Society for Civil Engineers' (ASCE) chief innovation officer, shared his vision and talk titled "Future World Vision: Engineering the Future Built Environment" for addressing those challenges in the 2022 Neil and Maurita Stueck Distinguished Lecture Stueck Lecture at Missouri S&T.

Buckwalter is responsible for helping shape the strategic direction and operational effectiveness of the ASCE and is a long-time member of the ASCE Industry Leaders Council. He also directs an innovative strategic project called Future World Vision where ASCE is creating a computer model to assess potential built environments 50 years into the future and the resulting impact on the engineering profession. Buckwalter has decades of infrastructure work experience and was a member of the National Infrastructure Advisory Council for four years reporting to the White House under Presidents Barack Obama and George W. Bush.

Buckwalter earned a degree in physics from Monmouth University, completed advanced coursework at George Washington University and the Massachusetts Institute of Technology, and has served as executive in residence teaching market strategy at the University of Chicago. He was the 2018 recipient of the ASCE William H. Wisely American Civil Engineer Award. Buckwalter also serves on many boards, including the International Coalition for Sustainable Infrastructure, the Center for Public Policy Innovation, the National Homeland Defense Foundation and ASPIE, a non-profit foundation serving adults with disabilities.

View the lecture: https://youtu.be/bsTfKfndQIE

ASCE-S&T wins Distinguished Chapter Award for Region 7

Missouri S&T American Society of Civil Engineers (ASCE) student chapter was awarded the 2022 ASCE Distinguished Chapter Award for Region 7, which includes Wyoming, Colorado, South Dakota, Nebraska, Kansas, Iowa and Missouri.

S&T also received a national ASCE Significant Improvement Award. The ASCE Committee on Student Members recommended S&T for the awards based on activities in the chapter's 2021 annual report.

"ASCE offers students opportunities for professional development, social and service events, and community partnerships as well as scholarships," says **Dr. Joel Burken**, chair of civil, architectural and environmental engineering and faculty advisor for S&T's ASCE student chapter. "ASCE also conducts the steel bridge and concrete canoe international competitions that S&T students compete in each year. I am proud of what the students in our chapter have accomplished. This is well-deserved recognition."

ASCE sponsors nearly 300 student chapters in the U.S., including 26 in Region 7. Internationally, ASCE has more than 400 student chapters and nearly 32,000 student members.

ASCE Regional Governor Shawnna Erter, front left, and ASCE President Dr. Dennis Truax, front right, met with ASCE student chapter officers and advisors at S&T. First row, from left: Michael Radlund, Ryan Watts and Christopher Steinbach. Second row, from left: Jacob Fitzpatrick, Brenan Pool and Cameron Zalmanoff. Third row, from left: chapter advisor Dr. Joel Burken, St. Louis ASCE Section President John Weiland, and chapter advisor Dr. Kevin McLain.

Lifelong learning educator gives Hurst-McCarthy Lecture

Dr. Jeffrey Russell, pictured front center, with Dr. Islam El-adaway, the Hurst-McCarthy professor and a group of graduate students

"Project management is an ever-evolving discipline. Technology, business models, procurement practices, and global competition continue to change, as do customers, their needs, constraints, and challenges within a much more uncertain environment," says **Dr. Jeffrey S. Russell**, who gave the 2022 Hurst-McCarthy Lecture at Missouri S&T.

In his lecture, titled "Project Management – Art and Science," Russell focused on some of the underlying foundational theories that support the practice of project management. Specifically, he highlighted systems, networks, constraints, human behaviors, and change.

Russell is vice provost for lifelong learning, dean of the Division of Continuing Studies, and a professor of civil and environmental engineering at the University of Wisconsin-Madison. In his role as vice provost, he is responsible for leading the university's programs and services for lifelong learners and nontraditional students.

Prakash Lecture on earthquake-induced soil liquefaction

In April **Dr. Edward Kavazanjian Jr.** presented the Prakash Distinguished Lecture. He discussed how case histories are essential to the field of geotechnical engineering and talked about current issues and their use in his work on bio-mediated desaturation for mitigating the potential for earthquake-induced soil liquefaction.

Kavazanjian is a Regents Professor and the Ira A. Fulton Professor of geotechnical engineering in the School of Sustainable Engineering and the Built Environment in the Ira A. Fulton Schools of Engineering at Arizona State University. His expertise includes geotechnical engineering for civil infrastructure systems, design and construction of waste containment systems, geotechnical earthquake engineering, the mechanical properties of solid waste, and the emerging field of biogeotechnical engineering.

The Shamsher and Sally Prakash Lecture in Geotechnical Engineering was founded by **Dr. Shamsher Prakash**, who joined the S&T civil engineering department in 1978 as an associate professor in geotechnical engineering.

Dr. Edward Kavazanjian Jr., pictured front center, with Dr. Xiong Zhang and Dr.Guney Olgun and several of their geotechnical engineering students

Khayat appoints review panel

Dr. Kamal Khayat, interim vice chancellor for research and innovation, appointed seven faculty members to the inaugural Research Proposal Review and Mentoring (RPRM) panel. The RPRM program's goal is to enhance Missouri S&T's research success by expanding proposal development mentoring opportunities, affecting major strategic proposals development, and strengthening proposal review processes. Panel members will mentor junior faculty pursuing early-career awards to increase the chance of success for those faculty members.

Learn more: econnection.mst.edu/2022/02/seven-faculty-named-to-new-research-panel

Bass named principal at Wallace Design Collective

Wallace Design Collective recently announced that **Alec Bass**, PE, CFM, has been named a principal of the firm. Bass plays an integral role in the growth of the firm, coupling engineering know-how with an emphasis on client care, mentorship and business development.

Bass received his bachelor of science degree in civil engineering from Missouri S&T in 2008 and is a licensed professional engineer in Oklahoma and six other states. He is a member of the Oklahoma Floodplain Managers Association, the American Society of Civil Engineers and the American Concrete Institute.

He joined Wallace's Oklahoma City office in 2017 and has 15 years of experience in the field. His experience includes industrial, retail, educational, worship, municipal and government projects.

Glisson joins DFI

Matthew Glisson, MS CE'10, joined the Deep Foundations Institute (DFI) (www.dfi.org) as director of technical activities in February. DFI has more than 4,000 members worldwide.

Glisson works with technical committee chairs to ensure that DFI's programs are relevant to current industry practice and needs. He also helps the company identify new collaborative opportunities in the deep foundations industry.

Submit an alumni note: mineralumni.com

Eladaway talks solar energy

What is the cost on installing residential solar energy systems? That was the question posed at a roundtable discussion held in February.

Missouri S&T's **Dr. Islam El-adaway**, the Hurst-McCarthy Professor, along with other state experts, discussed how homeowners could make the transition. They talked about the science, benefits and cost of solar energy infrastructure, and how it's being used to respond to climate change.

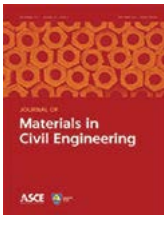
Learn more: mostpolicyinitiative.org/event/solar-roundtable

Schonberg part of $2 million NASA research project

Dr. William Schonberg, professor of civil, architectural and environmental engineering, is part of a fascinating new project that will develop mineral extraction techniques for lunar construction as part of a NASA project to make it possible for people to live and work on the moon.

Learn more: news.mst.edu/2022/02/nasa-selects-st-for-moon-mining-project.

Ma published in ASCE journal



Dr. Hongyan Ma, CEC Dean's Scholar and associate professor of materials engineering, recently published a paper "Nanomodified Cement-Based Materials: Review (2015–2020) of Molecular Dynamics Studies" in the ASCE *Journal of Materials in Civil Engineering*.

View the paper: ascelibrary.org/doi/full/10.1061/(ASCE)MT.1943-5533.0004056

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CONGRATULATIONS TO THE STEEL BRIDGE TEAM!

Missouri S&T Steel Bridge Design Team recently took first place at the regional American Institute of Steel Construction (AISC) Mid-Continent Student Conference. They will now put their bridge engineering and construction skills to the test nationally **May 27-28** at Virginia Tech in Blacksburg.