Dear Friends,

As we close the door on 2019 and head into 2020, the Civil, Architectural and Environmental Engineering Department notes considerable pride over last year’s accomplishments and anticipates new possibilities for the future. The year 2020 is special to us, as it marks the 150th anniversary of the founding of the Missouri School of Mines (MSM), as the charter was signed on Feb. 24, 1870. Following the founding of MSM, two of the first three graduates earned civil engineering degrees. Those two initial civil engineers — Gustavus Adolphus Duncan and John Holt Gill — started the legacy of civil engineering in Rolla, Missouri, that continues today. Much has changed over those 150 years, but the legacy of high expectations and outstanding work remains the underpinning for all we attempt to accomplish at Missouri S&T.

The end of calendar year 2019, marked the target for our aggressive Vision 2020 Strategic Plan. We began this venture in 2011 and will continue to move closer to completing our efforts to advance the CArEE Department. We achieved notable goals, including an increase in scholarly output that led S&T in growth and accomplishment. Our team realized increased productivity in most aspects of our scholarly work. We present our accomplishments here with pride, but we also know our work is not done. As a team, the faculty, staff and students made contributions in productivity that saw increases in publications, research expenditures, capabilities and national visibility. We advanced in these areas at the same time our 2019 enrollment topped 600 students!

We celebrated a strong year of production, with more than 163 peer-reviewed journal articles written, as well as many notable international keynote talks and presentations given. Research productivity increased to $4.7M — a 74% increase over 2017 — and new awards for fiscal year 2018 topped $5.98M. Our faculty were honored with many national and international awards, ranging from notable research breakthroughs to recognition for career accomplishments in teaching, service and research (page 6).

Our talented team and our research and educational facilities will undoubtedly create more opportunities for our graduates to go out and Change the World in their career as Miner alumni. If you have any questions about the exciting things going on in Rolla or our future vision in the Civil, Architectural and Environmental Engineering Department at Missouri S&T, please contact me.

Sincerely,

Joel G. Burken
Ph.D., P.E., BCEE, F.AEESP
Department Chair and Curators’ Distinguished Professor
Civil, Architectural and Environmental Engineering

burken@mst.edu
CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING

BY THE NUMBERS

care.mst.edu

RANKED IN TOP 50
CIVIL ENGINEERING #46, AND
ENVIRONMENTAL ENGINEERING #48
U.S. News & World Report
Graduate engineering programs at both public and private universities (2021)

610+
CArEE student enrollment

$6M
New research awards (FY’18)

7 DEGREE PROGRAMS
CIVIL ENGINEERING
Bachelor of Science (B.S.)
Master of Science (M.S.)
Doctor of Philosophy (Ph.D.)
Doctor of Engineering (D.E.)

ARCHITECTURAL ENGINEERING
Bachelor of Science (B.S.)

ENVIRONMENTAL ENGINEERING
Bachelor of Science (B.S.)
Master of Science (M.S.)

31
Full-time faculty members

$377K
Annual scholarships awarded

14,800 ft²
NEW LAB SPACE IN 2020
CLAYCO ACML
Advancing S&T’s leadership in infrastructure engineering

35%
CArEE department undergraduate female engineers

$4.7M
Research expenditures (CY’19)

53%
Undergraduate female environmental engineers

COLLEGE OF ENGINEERING AND COMPUTING

cec.mst.edu

249
CEC faculty members

One of 20
LARGEST ENGINEERING COLLEGES IN U.S

$34M
New research awards (FY’19)

Bachelor’s degrees awarded
1,050
Planning for future climate changes in the Arctic

As global temperatures warm, communities in the Arctic regions of Alaska face long-term changes to their way of life. Missouri S&T researchers are working as part of a five-year, $3 million National Science Foundation (NSF) project to help those communities plan for the future.

Dr. Xiong Zhang, associate professor of geotechnical engineering, is working with Dr. Ming Xiao, associate professor of civil engineering at Penn State University, to develop a geotechnical hazard map to predict the effects of warming and thawing of permafrost. When frozen, permafrost provides a solid foundation for roads, airports, oil pipelines and railroads. But as the soil warms and softens, infrastructure can be damaged and possibly destroyed. Along Alaska’s coastline, thawing permafrost can cause a loss of land mass, which in turn could force entire communities to relocate. Zhang’s research will help determine where and how much damage could occur.

“The Arctic is very sensitive to climate change,” Zhang says. “It’s estimated that by 2050, 30% of permafrost could be affected.”

Navigating the New Arctic is one of NSF’s 10 Big Ideas. The NSF project is intended to document and understand rapid changes in the Arctic, gauge possible effects on U.S. national security and economic development, and enable sustainable Arctic communities.

Envisioning digital cities

Dr. Genda Chen, the Robert W. Abbett Distinguished Professor of Civil Engineering, wants to make the city of the future more intelligent – able to build and repair its roads, bridges, electrical grids, power plants and other infrastructure through a network of robotics, sensors and data analytics that diagnose and identify the community’s needs.

His team of researchers at the Center for Intelligent Infrastructure (CII) are working to create new infrastructure capabilities on a grand scale to lower construction and maintenance costs and improve worker safety. His team at the INSPIRE University Transportation Center is already developing robotics technology that focuses on inspection and maintenance of bridges. Chen, director of both centers, envisions a future where a digital stream of data from sensors could be used to run scenarios and help public officials determine policy and plan for potential infrastructure problems before they happen.

New research facility in construction phase

Missouri S&T will soon augment work underway through a new research facility – the Clayco Advanced Construction and Materials Laboratory (ACML). When completed in summer 2020, the ACML will expand Missouri S&T’s infrastructure research capabilities to develop and test new construction materials and methods, which can make repaired bridges last longer. The addition of this premier facility will position S&T as a global leader in infrastructure research and will help realize our long-term vision of making civil infrastructure safer, more durable and longer lasting.

Follow the construction through time-lapse videos at rol.la/ACML-live.
New transportation center to address aging infrastructure in Missouri

Aging infrastructure in Missouri – such as crumbling roads and bridges – affects Missourians every day and can impede the state’s economic growth. A new transportation research center announced in December will combine the research of Missouri S&T and the other University of Missouri (UM) System campuses with industry and government leaders to develop new strategies to address the state’s infrastructure issues.

The Missouri Center for Transportation Innovation (MCTI) will be led by the University of Missouri-Columbia (MU) for its first three years. Dr. Bill Buttlar, the Glen Barton Chair in Flexible Pavement Systems at the MU College of Engineering, will serve as the center’s director, joined by Dr. John Myers of Missouri S&T as the deputy director.

“The MCTI is an exciting opportunity to help Missouri address infrastructure challenges now and into the future,” says Myers. “The MCTI will also provide an opportunity for our students to gain real-world experience as they prepare for civil engineering careers.”

The MCTI will share research from all four UM System campuses with the Missouri Department of Transportation (MoDOT), which is providing base funding for the project through the state’s planning and research dollars. The MCTI hopes to attract federal funding as well.

New consortium aims at an integrated construction industry vision

Leading companies from the construction industry in Missouri are joining forces with academia at Missouri S&T to optimize corporate performance and project life cycle through an integrated construction engineering and management (CEM) vision directed at student development, research and professional development.

The new Missouri Consortium for Construction Innovation (MO-CCI), officially launched in 2019, is composed of both the contractor side (i.e. contractors, sub-contractors, suppliers, etc.) and the owner side of the state of Missouri.

Together with the consortium’s growing membership, the initial MO-CCI members — ARCO Construction, BJC Healthcare, Brinkmann Constructors, Clayco, Greensfelder and McCarthy Building Companies — will collaborate to help solve some of the needs of Missouri’s construction industry.

MO-CCI will organize an annual conference to report and disseminate results and findings related to all activities in the prior year, provide various seminars by CEM academic and industry experts, and develop plans, strategies, and priorities for future activities.

To learn more about this new consortium, visit the website at mo-cci.mst.edu. If you have any questions or would like to become a member, contact Dr. Islam El-adaway, Hurst-McCarthy Professor and Director of MO-CCI by email at eladaway@mst.edu.

Forged in Gold, Missouri S&T’s first 150 years

Missouri S&T was chartered in 1870 as the University of Missouri School of Mines and Metallurgy. Known more commonly as the Missouri School of Mines or MSM, it was one of the nation’s first technological schools and the first mining school west of the Mississippi River. The first classes at MSM were held Nov. 6, 1871, in the Rolla Building, which still stands today as the oldest structure on campus.

S&T is planning several public events to commemorate its sesquicentennial, beginning with “S&T Day at the Capitol” in Jefferson City in February 2020 to mark the 150th anniversary of Missouri Gov. Joseph W. McCord’s signing of the legislation that called for a “school of mines” to be created in southern Missouri. Missouri S&T will kick off a 13-month celebration of its founding during Homecoming Weekend (Oct. 16-17, 2020). Sesquicentennial events will continue through November 2021, which will mark the 150th anniversary of the first day of classes at S&T.

FORGED IN GOLD BOOK ORDERS

Pre-order by May 15, 2020 and save!
• Get $10 off the regular retail price of $49.99
• Be automatically entered for prizes
• Get a free commemorative gift pack*

For more information about the university’s 150th anniversary, or to purchase the book, visit 150.mst.edu.
Faculty appointments, awards and promotions

Dr. Genda Chen, professor and Robert W. Abbett Distinguished Chair in Civil Engineering, received one of two 2019 Person of the Year Awards given by the Structural Health Monitoring (SHM) Journal at its 12th International Workshop on Structural Health Monitoring.

Dr. Islam El-adaway was promoted to professor. He is the Hurst/McCarthy Professor of Construction Engineering and Management. He joined Missouri S&T in 2018 after two prior appointments with the University of Tennessee – Knoxville and Mississippi State University. He was selected a 2019 ENR Top Young Professional and his work with his graduate students was selected for two ASCE Editor Choice journal papers in 2018.

Dr. Dimitri Feys was promoted to associate professor with tenure. He joined S&T in 2013 and earned his Ph.D. from Ghent University, Belgium in 2009. He works on rheology of cement-based materials, design and placement of high-performance concrete. Feys was also recognized in 2018 with the ACI Young Member Award for Professional Achievement.

Dr. Daniel B. Oerther, professor of environmental health engineering, received the Education Excellence award from the National Society of Professional Engineers for, “linking engineering education with the promotion of professional practice.”

Dr. Lesley Sneed, associate professor of civil engineering, was appointed to serve on American Concrete Institute (ACI) Committee 318-25, Structural Concrete Building Code. This committee develops and maintains building code requirements for structural concrete. The ACI 318 Building Code Requirements for Structural Concrete is adopted, either directly or as a main reference, in the national code of more than 30 countries.

Dr. Yang Wang recently earned the a Ph.D. Award from the Gesellschaft für Aerosolforschung (GaeF), or Association for Aerosol Research, based in Germany. An assistant professor of environmental engineering, Wang received the award at the association’s General Assembly in Sweden in August.

And the UM System and S&T awards go to...

Several faculty members were honored with awards in 2019 for excellence and achievement in teaching, research and service.

Pictured from left to right with Dr. Joel Burken, Department Chair:

- Dr. Jenny Liu, Missouri S&T Faculty Research Award
- Dr. Lesley Sneed, Missouri S&T Outstanding Teaching Award
- Dr. Mark Fitch, UM System President’s Award for Service
- Dr. Daniel Oerther, UM System Ratchford Award
- Dr. Eric Showalter, Missouri S&T Faculty Achievement Award
- Dr. Hongyan Ma, Missouri S&T Faculty Research Award

International lifetime recognition

Milton P. Gordon Award for Excellence in Phytoremediation

The International Phytotechnology Society (IPS) awarded Dr. Joel Burken the Milton P. Gordon Award for Excellence in Phytoremediation during the society’s annual conference in Changsha, Hunan Province, China. IPS recognizes one leader every year in the field of phytoremediation – a process that uses various types of plants to remove, stabilize or destroy contaminants in soil and groundwater. The award was established in 2007, two years after Gordon’s death, to honor his excellence in research, promotion of technology, and teaching and mentoring undergraduate and graduate students. Burken is only the fourth American recipient of the award.

Lifetime Achievement Award in the Field of Self-consolidating Concrete

Dr. Kamal H. Khayat, Vernon and Maralee Jones Professor of Civil Engineering, was honored for his lifetime achievements in the field of self-consolidating concrete. The 2nd International RILEM Conference on Rheology and Processing of Construction Materials (RhoeCon2) was held in conjunction with the 9th International RILEM Symposium on Self-Compacting Concrete (SCC9) in Dresden, Germany Sept. 8-11. RILEM is the International Union of Laboratories and Experts in Construction Materials, Systems and Structures, and Khayat is one of only 64 named Fellows in the RILEM organization.
The Masonry Society honors Jemison

Sarah Jemison, ArchE and CE’18, MS CE’18, was awarded the 2019 Outstanding Master’s Thesis Award from The Masonry Society (TMS) for her work “Compressive Behavior of Masonry Columns Confined with Steel Reinforced Grout (SRG) Composite” under the direction of Dr. Lesley Sneed.

While at S&T, Jemison was a Greenberg Scholar, a mechanics of material lab assistant, and she was also involved with the Steel Bridge Design Team and Chi Epsilon. Since graduation, she has been working at KPFF Consulting Engineers in St. Louis as a structural engineer.

Students sweep conference awards

Missouri S&T civil engineering students swept the 2019 Oklahoma Transportation Research Day Conference. They won two out of the three awards given. Amro Ramadan took first place and a team made up of students Binod Shrestha, Mohanad Abdulazeez and Ahmed Ghani, took second place.

Ph.D. student scholarships

Javad (Jay) Galinmoghadam, a Ph.D. student in geotechnical engineering, was awarded a $5,000 Geosynthetic Institute (GSI) Fellowship grant for his research proposal "Use of Wicking Geotextile to Mitigate Frost Action in Cold Regions: a Numerical Study."

Beshoy Riad, a Ph.D. student in civil engineering, was awarded the ASCE 2019 GeoConfluence Research Scholarship. His research is focused on developing a landslide warning system for rainfall-induced landslides for natural slopes.

Xingxing Zou, a Ph.D. student in civil engineering, was awarded the Great Plains Chapter of the International Concrete Repair Institute Scholarship in the amount of $1,500 for the 2019-20 school year. His research focuses on the subject of strengthening and repairing concrete structures using advanced composite materials.

Digital Water Works Fellowship awarded to Ph.D. student in water resources

Wesam Mohammed Ali, a Ph.D. candidate in civil engineering, was presented a certificate for receiving the Digital Water Works Excellence in Water Fellowship. During the Stueck Lecture held this spring, Dr. Paul F. Boulos, a global water resources and wastewater industry expert, shared leadership lessons with students, faculty and members of the S&T Academy of Civil Engineers. After spending a few days with people in the department, Boulos helped facilitate a fellowship offered by Digital Water Works (digital-ww.com), an engineering services provider where he serves as CEO. This new fellowship was offered to support an outstanding graduate student pursuing a degree in water resources.

Read more at: econnection.mst.edu/2019/11/boulos-delivers-stueck-lecture-establishes-fellowship.

An ultimate adventure

Scott Grier, a senior in civil engineering and engineering management, spent the fall semester in Hong Kong as a recipient of the Benjamin A. Gilman International Scholarship to study abroad. The scholarship allowed Grier to participate in academic and cultural experiences while studying structural engineering at Hong Kong University of Science and Technology.
Magdy Abdelrahman

Missouri Asphalt Pavement Association Endowed Professor MATERIALS ENGINEERING

Ph.D., energy, environmental and chemical engineering, Washington University

Scholarly Focus, Teaching or Research Areas
Experienced in the area of infrastructure sustainability with applications in pavement engineering; expert in asphalt modifications including the use of recycled modifiers in civil/construction applications

Honors or Awards
• Missouri Asphalt Pavement Association (MAPA) Endowed Professorship in Flexible Pavement, 2017
• Researcher of the Year, North Dakota State University, 2009
• College of Engineering and Architecture CAREER Award, National Science Foundation (NSF), 2009

Selected Academic Activities or Research Projects
• Preparing Interdisciplinary Professional for Rebuilding/Engineering Resilient Infrastructure of the Nation, U.S. Dept. of Education, 2019-22
• Understanding and Improving Heterogeneous and Modern Recycled Asphalt Mixes, Missouri Department of Transportation (MoDOT), 2018-20
• CAREER: A Program of Research Focused on Understanding of Interaction of Recycled Materials with Asphalt, Outreach, Academic and Engineering Development, NSF, 2009-15

Selected Publications and Presentations


Stuart Baur

Assistant Chair and Associate Professor ARCHITECTURAL ENGINEERING

Ph.D., civil engineering, Missouri University of Science and Technology

Scholarly Focus, Teaching or Research Areas
Developing sustainable communities through renewable energy technology including various techniques that involve energy efficient lighting design and daylight integration

Honors or Awards
• Experiential Learning Award, S&T
• Outstanding Academic Advising Award, S&T
• Engineers Make a World of Difference Award, American Military Engineers
• Outstanding Solar House Team Advisor Award, S&T

Selected Academic Activities or Research Projects
• 2020 Solar Decathlon – Phase I, Department of Energy, 2019
• Photovoltaic Recycling, Ozark Regional Solid Waste Management District, 2018-2019
• 3rd Place Architecture, Innovation and Appliances, 4th place Communications, 4th place Overall, Department of Energy National Design Competition, Solar Decathlon, 2017
• A Climate-Responsive Adaptive Control for a Combination Passive Solar Shading and Natural Ventilation, Environmental Protection Agency (EPA), 2013-2014

Selected Publications and Presentations

Baur, S.W., Stanley, R.J., “Assessing Missouri University of Science and Technology Student Academic Performance from 2014-2017 based on Project Lead The Way College Credit Course Experience,” Transactions on Techniques for STEM Education, Vol. 4, No. 1, pages 75-85, October-December 2018, ISSN:2381-649X.


Joel Burken

Department Chair and Curators’ Distinguished Professor
CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING
Ph.D., civil and environmental engineering, University of Iowa

Scholarly Focus, Teaching or Research Areas
Phytoremediation, plant-chemical interactions, mine restoration and remote sensing

Honors or Awards
• U.S. EPA Science Advisory Board, 2016-23
• Milton Gordon Award, Lifetime Research Accomplishment in Phytoremediation, International Phytoremediation Society, 2019
• American Academy of Environmental Engineers and Scientists (AAEES) Science Award, 2018
• President, Association of Environmental Engineering and Science Professors (AEESP), 2011-12
• Member Board of Directors, AEESP, 2008-12
• Fellow, AEESP, Class of 2016

Selected Academic Activities or Research Projects
• Plant Uptake of Emerging and Fugitive Compounds: A Sustainable Approach to Exposure Assessment, NSF, 2016-20
• The Missouri Transect: Climate, Plants, and Community – EPSCOR, NSF, 2014-20

Selected Publications and Presentations


Genda Chen

Robert W. Abbett
Distinguished Professor
CIVIL ENGINEERING
Director, Center for Intelligent Infrastructure
Ph.D., civil engineering, State University of New York at Buffalo

Scholarly Focus, Teaching or Research Areas
Structural health monitoring (SHM), structural control, structural dynamics, robotic platform dynamics, bridge preservation, infrastructure resilience to multi-hazards, computational and experimental mechanics

Honors or Awards
• SHM Person of the Year, *Structural Health Monitoring*, 2019
• Certificate of Registration, Adaptive Wavelet Transform, 2019
• Faculty Research Excellence Awards, S&T, 2009, 2011, 2013
• U.S. Patent, Strain Sensitive Coax Cable Sensor, 2008
• CAREER Award, NSF, 1998

Selected Academic Activities or Research Projects
• An Unmanned Aerial System of Visible Light, Infrared and Hyperspectral Cameras with Novel Signal Processing and Data Analytics, Pipeline and Hazardous Materials Safety Administration
• Traffic Disruption-Free Bridge Inspection Initiative with Robotic Systems, Seven-State Pooled-Fund Study, MoDOT
• Inspecting and Preserving Infrastructure through Robotic Exploration (INSPIRE) – a Tier 1 University Transportation Center, USDOT
• Nano Ferrous Particles Dispersed on Optical Fiber Sensors for Distributed Corrosion Assessment of Civil Infrastructures, NSF

Selected Publications and Presentations


Chen, G., Keynote Speaker, “SHM Roles in Autonomous Inspection and Preventive Maintenance of Bridges,” The 8th International Conference on Structural Health Monitoring of Intelligent Infrastructure, Brisbane, Australia, December 2017.
Wen Deng

Assistant Professor
GEOTECHNICAL ENGINEERING
Ph.D., geosciences, Iowa State University

Scholarly Focus, Teaching or Research Areas
Seismic wave and ground fluids interaction, soft matter physics in constricted pores, bio-inspired soil/rock mediation, multiphase flow, microfluidics, geoenvironmental engineering, geotechnical asset management

Selected Publications and Presentations


Islam El-adaway

Hurst/McCarthy Professor and Founding Director, Missouri Consortium of Construction Innovation
CONSTRUCTION ENGINEERING
Ph.D., civil engineering, Iowa State University

Scholarly Focus, Teaching or Research Areas
Modeling and simulation, sustainable infrastructure management, resilient hazard management, energy management, contractual and dispute management, decision and risk management

Honors or Awards
• Thomas Fitch Rowland Prize, ASCE, 2020
• Top Professional, Engineering News Record (ENR), 2019
• Editor’s Choice Peer-Reviewed Journal Paper, (2 different times), ASCE
• Best Peer-Reviewed Journal Paper, ASCE, 2017
• Outstanding Reviewer (7 different times), ASCE

Selected Academic Activities or Research Projects
• Alleviating Electric Grid Congestion – Understanding Consumer and Utilities Response to Infrastructure Investment in Distributed Solar Generation, National Science Foundation (NSF)
• The Impact of Offsite Construction on the Workforce, Construction Industry Institute
• Using the Transmission Network, Consumer Behavior, and Market Structure to Maximize the Value of Solar Generation, Sloan Foundation
• A Multidisciplinary Fellowship Program in Engineering Management and Systems Engineering for Rebuilding Infrastructure, U.S. Department of Education

Selected Publications and Presentations


Mohamed ElGawady

Professor and Benavides Faculty Scholar
CIVIL ENGINEERING

Ph.D., structural engineering, Swiss Federal Institute of Technology (EPFL) Lausanne, Switzerland

Scholarly Focus, Teaching or Research Areas
Resilient infrastructure, earthquake engineering, extreme loads, impact loads, infrastructure repair, metamaterial, sustainable material, tire derived aggregate, geopolymer concrete, 3D printing

Honors or Awards
• American Society of Civil Engineers (ASCE) Innovation Award with Ph.D. student, Yasser Darwish, 2019
• First Place and Second Place Poster Prize, Oklahoma Transportation Research Conference, Midwest City, 2019

Selected Academic Activities or Research Projects
• Using Tire Derived Aggregates for Bridge, Masonry, Concrete and Chip Seal Applications, MoDOT and MoDNR
• Behavior of Corroded Steel H-piles Before and After Repair Using FRP, Geopolymer Concrete, UHPC, Polymer Modified Concrete, USDOT, MoDOT
• CrunchPillow: Meta-material Impact Protection Units, NSF
• Recycled Paint for More Durable Concrete Structure, MoDNR
• Retrofitting of Metal Roofs Using Single Ply, GAF Material LLC
• Evaluating and Relaxing the Limits on Flexural Reinforcement Ratio of Masonry Shear Walls, National Concrete Masonry Association
• Class-c Fly Ash, Off-spec Fly Ash, and Bottom Ash for Geopolymer and Flowable Fill Concrete, MoDOT, MoDNR, and Ameren Corp.

Selected Publications and Presentations


Dimitri Feys

Associate Professor
MATERIALS ENGINEERING

Ph.D., civil engineering, Ghent University, Ghent, Belgium

Scholarly Focus, Teaching or Research Areas
Rheology of cement-based materials and complex suspensions; mix design, workability and placement of concrete

Selected Academic Activities or Research Projects
• Minimizing the Effect of Pumping on SCC Workability and Freeze-thaw Durability, ACI-CRC
• Influence of Casting Conditions on Durability and Structural Performance of HPC-ARL: Changes in Workability and Air-void System of Concrete due to Pumping, RE-CAST
• Understanding Early Age Behavior of Cement: Rheology and Hydration Kinetics of Pure C3S and C3A, UMRB

Selected Publications and Presentations


Mark Fitch

Assistant Chair and Associate Professor ENVIRONMENTAL ENGINEERING

Ph.D., chemical engineering, University of Texas at Austin

Scholarly Focus, Teaching or Research Areas
Constructed wetlands/biochemical reactors for metals removal, biofiltration/membrane biofiltration, nutrient uptake in streams

Honors or Awards
• UM System President’s Award for University Citizenship – Service, 2019

Selected Academic Activities or Research Projects
• Fitch was honored for advising the Missouri S&T Engineers Without Borders (EWB) chapter. EWB is very active, with four separate teams doing projects in Guatemala, where a team completed a well, pump, and water tower system for a community of 3,000, and now is designing a 400-student school building. Ecuador, where a team is implementing a combination of rainwater catchment and slow-sand filtered river water for a community of 150 people – that team had remotely finished upgrading a water system for a 10,000-person community in Honduras after travel was prohibited due to safety concerns; Bolivia, where a team completed a well water system for a community of about 100 and moved across the river to work on a similar project; and also in Bolivia, the fourth team upgraded a disperse spring collection system for a small village to include sedimentation, slow sand filtration, and a 60-m piping bridge and then moved to a community on the shoulder of a mountain and is designing a water piping system to bring glacial melt water down a two-mile long 30-40% grade. To support all these projects, the chapter annually raises $70K-$150K.

• Fitch led the S&T campus through the Higher Learning Commission accreditation process. He also served a five-year rotation as an officer of the S&T Faculty Senate, which included three years of service on the UM System Intercampus Faculty Council.

Selected Publications and Presentations
XianBiao Hu

Assistant Professor TRANSPORTATION ENGINEERING
Ph.D., transportation engineering, University of Arizona

Scholarly Focus, Teaching or Research Areas
Connected and autonomous vehicles, electric vehicles, big data, artificial intelligence, mobility modeling, traffic flow theory, traffic operation and safety

Honors or Awards
• Fellow, Excellence in Civil Engineering Education (ExCEEd), American Society of Civil Engineers (ASCE)

Selected Academic Activities or Research Projects
• Development of ATMA/AIPV Deployment Guidelines Considering Traffic and Safety Impacts, Colorado DOT
• Electric Vehicle Charging Station (EVSE) Innovation: Streetlight Charging in City Right-of-Way, DOE
• National Center for Transportation Infrastructure Durability and Life Extension (NCTriDurLE), USDOT

Selected Publications and Presentations


Kamal Khayat

Vernon and Maralee Jones Professor CIVIL ENGINEERING Director, Center for Infrastructure Engineering Studies
Ph.D., civil engineering, University of California, Berkeley

Scholarly Focus, Teaching or Research Areas
High-performance cement-based materials for structural applications and rehabilitation; self-consolidating concrete; high-performance concrete with adapted rheology; materials for 3D printing; sustainable hydraulic binders; recycled materials for concrete

Honors or Awards
• Lifetime Achievement Award, 2nd International RILEM Conference on Rheology and Processing of Construction Materials and 8th International Symposium RILEM Symposium on Self-Compacting Concrete Conference Organized in Honor of Khayat, Germany, 2019
• Fellow, RILEM, 2015
• Fellow, ACI, 2004

Selected Academic Activities or Research Projects
• Center for Novel Carbon-Efficient Binders for Sustainable Infrastructure, UM System
• Field Implementation of Compacted Concrete Pavement, Mexico, Mo., MoDOT
• Superabsorbent Polymers in Concrete to Improve Durability, University of Illinois, Urbana Champaign
• Enhanced Performance of Fiber-Reinforced Concrete for Construction and Repair, Euclid Chemical

Selected Publications and Presentations
Khayat, K.H., 2019 Keynote Speaker, International Conference on Innovative materials for Sustainable Civil Engineering (IMSCE), Nanjing, China, August 2019.

Khayat, K.H., 2019 Keynote Speaker, 9th International RILEM Symposium on Self-Compacting Concrete, Dresden, Germany, September 2019.


Nicolas Ali Libre

Assistant Teaching Professor
STRUCTURAL ENGINEERING
Ph.D., civil engineering, University of Tehran, Iran

Scholarly Focus, Teaching or Research Areas
Teaching innovations and educational technologies; computational mechanics and applied mathematics; advanced composite materials

Honors or Awards
• UM System President’s Award for Innovative Teaching
• FTTC Teaching with Technology Award, UMSL
• Faculty Achievement Award, S&T
• Joseph H. Senne, Academy of Civil Engineering Faculty Teaching and Service Achievement Award, S&T Academy of Civil Engineers

Selected Academic Activities or Research Projects
• Development and Evaluation of an Early Alert System to Identify Academically At-risk Students,” Educational Research Grant, S&T Center for Advancing Faculty Excellence
• Develop, Implement, Assess, and Disseminate Entrepreneurially Minded Modules in Mechanics of Materials,” Awarded by Lawrence Technological University and KEEN Partners
• Roller Compacted Concrete for Rapid Pavement Construction, Co-PI, MoDOT

Selected Publications and Presentations

Libre, N.A., Baur, S.W., “Introduce High School Students to Engineering Disciplines: Activities and Assessment,” ASEE Midwest Section Conference, September 2019, Wichita, KS.


Jenny Liu

Professor
MATERIALS AND PAVEMENT ENGINEERING
Ph.D., civil engineering, Texas A&M University

Scholarly Focus, Teaching or Research Areas
Engineering characterization and modeling of infrastructure materials; pavement design, testing, preservation, and condition assessment; sustainable materials and resilient infrastructure adapting to climate change/extreme events

Honors or Awards
• Associate Editor, ASCE Journal of Materials in Civil Engineering
• Associate Editor, ASCE Journal of Transportation Engineering Part B: Pavements
• Faculty Research Award, S&T, 2019
• Elected Board Member and Treasurer, International Association of Chinese Infrastructure Professionals, 2019

Selected Academic Activities or Research Projects
• Snow and Ice Treatment Products Evaluation, MoDOT
• National Center for Transportation Infrastructure and Life-Extension (TriDurLE) – S&T Program, USDOT
• Laboratory and Field Evaluation of Modified Asphalt Binder in Alaskan Pavements, Funded by Alaska Department of Transportation and Public Facilities (AKDOT&PF), Emulsion Products, and USDOT
• High Abrasion-resistant and Long-lasting Concrete, Funded by AKDOT&PF, Alaska Basic Industries, and USDOT

Selected Publications and Presentations


Wu, H., Zhao, H., and Liu, J., “In Situ Experimental Study of FFT-based Bridge Weigh-in-motion System on a Continuous Box Girder Bridge,” 9th International Conference on Structural Health Monitoring of Intelligent Infrastructure, St. Louis, August 2019.
**Hongyan Ma**

**Assistant Professor**
**MATERIALS ENGINEERING**

Ph.D. civil engineering, Hong Kong University of Science and Technology

**Scholarly Focus, Teaching or Research Areas**
Next-generation cements; solid waste upcycling; smart materials and systems; biotechnology in construction; multi-scale modeling; durability of concrete structures; energy storage; mechanics of materials

**Honors or Awards**
- Faculty Research Award, S&T
- Dean’s Scholar, S&T College of Engineering and Computing
- Joseph H. Senne Jr. Faculty Scholarly Achievement Award, S&T Academy of Civil Engineers

**Selected Academic Activities or Research Projects**
- Sustainable and Durable Calcium Sulfoaluminate Binders Enabled by Multi-Physics Characterization and Theory-guided Machine Learning, NSF, 2019-22
- Collaborative Research: In-situ Production of Calcium Carbonate Nanoparticles in Fresh Concrete, NSF, 2018-21
- A Thermo-Kinetic Approach to Enhance the Use of Clays in Concrete, NSF, 2017-20
- Hyperspectral Image Analysis for Mechanical and Chemical Properties of Concrete and Steel Surfaces, INSPIRE UTC

**Selected Publications and Presentations**


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**Cesar Mendoza**

**Associate Professor**
**WATER RESOURCES ENGINEERING**
**Associate Chair GRADUATE PROGRAM**

Ph.D., civil engineering, Colorado State University

**Scholarly Focus, Teaching or Research Areas**
Environmental fluid mechanics, hydraulics, sediment transport and mathematical modeling; teaches undergraduate and graduate-level courses in the areas of fluid mechanics, hydraulics, rheology and environmental fluid mechanics

**Honors or Awards**
- J.H. Senne Academy of Civil Engineers Faculty Achievement Award, S&T, 2008
- Outstanding Student Advisor Award, Miner Alumni Association, 2007
- Excellence in Teaching Award, S&T School of Engineering, 2005, 2006

**Selected Academic Activities or Research Projects**
- Erosion Potential of the Osage River Downstream from Bagnell Dam, AMEREN UE
- Transport Processes of Mining Related Metals in the Black River of Missouri’s New Lead Belt, EPA
- USSES – Expert System for Urban Streams, MSD
- Cell-Enabled Water Citizen Science for Data and Knowledge Generation: WatCitSci, NSF

**Selected Publications and Presentations**


John Myers

Professor
STRUCTURAL ENGINEERING
Deputy Director,
Missouri Center for Transportation Innovation

Ph.D., civil engineering, University of Texas at Austin

Scholarly Focus, Teaching or Research Areas
Structures/high performance concrete (HPC) behavior and durability performance; fiber-reinforced polymers (FRP) in structural repair and strengthening applications with an emphasis related to concrete and masonry structures and durability performance; development of environmentally sensitive construction materials; hybrid materials and enhanced systems for blast resistant structures

Honors or Awards
• Society Fellow, ACI, ASCE, IIFC and TMS
• National Outstanding Educator Award, AEI
• Professional Recognition Award, ASCE

Selected Academic Activities or Research Projects
• GAANN Program for Doctoral Training in Civil Infrastructure Condition Assessment, Sustainability, and Resiliency, U.S. Dept. of Education, 2016-20
• Ultra-high Performance Fiber-Reinforced Concrete (UHPFRC) for Infrastructure Rehabilitation, USDOT, 2014-19
• Strengthening and Repair of Structural Concrete with a Fabric-reinforced-cementitious-matrix (FRCM): Laboratory Studies and Field Implementation, USDOT, 2014-19

Selected Publications and Presentations


Daniel Oerther

Professor
ENVIRONMENTAL HEALTH ENGINEERING

Ph.D., environmental engineering, University of Illinois, Urbana-Champaign

Scholarly Focus, Teaching or Research Areas
Renowned for interprofessional education and community based participatory research improving access to clean water and nutritious food worldwide

Honors or Awards
• C. Brice Ratchford Fellowship, University of Missouri System, 2019
• Lillian Wald Humanitarian Award, National League for Nursing, 2019
• Robert G. Quinn Award, American Society for Engineering Education, 2019
• Engineering Education Excellence Award, National Society of Professional Engineers, 2019

Selected Academic Activities or Research Projects
• Elected, Vice President of the American Academy of Environmental Engineers and Scientists, Annapolis
• Appointed, Trustee of the Chartered Institute of Environmental Health, London

Selected Publications and Presentations


Guney Olgun
Assistant Professor
GEOTECHNICAL
ENGINEERING
Ph.D., civil and environmental engineering, Virginia Polytechnic Institute and State University

Scholarly Focus, Teaching or Research Areas
Energy geotechnology, energy geostorage, geothermal foundations and shallow geothermal systems, geotechnical earthquake engineering, deep foundations, soil improvement, liquefaction, granular geomechanics, fluvial erosion, disaster resilience

Honors or Awards
• ASCE ExCEEd Fellow, 2020

Selected Academic Activities or Research Projects
• Disaster Resilience and Risk Management (DRRM) – Creating Quantitative Decision Making Frameworks for Multi-dimensional and Multi-scale Analysis of Hazard Impact, NSF
• Performance-based Decision Support System for Resilient and Sustainable Multi-Hazard Building Design, NSF
• Reduction of Seismic Shaking Intensity on Soft Soil Sites Using Stiff Ground Reinforcement, NSF
• Long Term Performance and Group Effect Considerations of Energy Piles, NSF

Selected Publications and Presentations


William Schonberg
Professor and Assistant Chair, Distance Education and Remote Programs
CIVIL, ARCHITECTURAL AND ENVIRONMENTAL ENGINEERING
Ph.D., civil engineering, Northwestern University

Scholarly Focus, Teaching or Research Areas
Armor/anti-armor, penetration mechanics, spacecraft shielding against meteoroid and orbital debris impacts, hypervelocity impact phenomena, building failure and collapse, design and construction of moon and Mars habitats, professionalism and engineering ethics

Honors or Awards
• Fulbright Distinguished Chair, Advanced Science and Technology, U.S. State Department, 2018
• Distinguished Scientist Award, Hypervelocity Impact Society, 2015
• Honor Award, NASA Engineering and Safety Center, 2010
• Fraunhofer Bessel Research Award, Humboldt Foundation, 2007
• Manuel T. Pacheco Academic Leadership Award, University of Missouri System, 2007
• Fellow, ASME 2005, ASCE, 2003

Selected Academic Activities or Research Projects
• Assessment of Spacecraft Passivation Requirements, NASA, 2019
• Improved Prediction of Terminal Ballistic Events Using Advanced Penetration Algorithms, DST Group, Melbourne, Australia, 2019
• Rupture of Composite Overwrapped Pressure Vessels, NASA, 2017
• Lightweight Installable Micrometeoroid and Orbital Debris Shield Concepts for International Space Station (ISS) Modules, NASA, 2011

Selected Publications and Presentations


Eric Showalter  

**Assistant Chair and Teaching Professor**  
**CIVIL ENGINEERING**  
Ph.D., civil engineering, Purdue University

**Scholarly Focus, Teaching or Research Areas**  
Teaches introductory courses in construction and the capstone design course, along with construction cost estimating, construction methods, and project delivery.

**Honors or Awards**  
- Associated General Contractors of America (AGC) National Outstanding Educator, 2020  
- St. Louis Section ASCE Professional Recognition Award, 2019  
- Faculty Achievement Award, Missouri S&T, 2019

**Selected Academic Activities or Research Projects**  
- Advisor to the S&T AGC Student Chapter, EWB and Concrete Canoe Student Design Teams and the Blacksmith Club

Lesley Sneed  

**Associate Professor and Stirrat Faculty Scholar**  
**STRUCTURAL ENGINEERING**  
Ph.D., civil engineering, Purdue University

**Scholarly Focus, Teaching or Research Areas**  
Behavior of reinforced and prestressed concrete structural members and systems; structural models and experimental methods; innovative methods of repair and strengthening of structures; evaluation of existing structures; and design codes for structural concrete

**Honors or Awards**  
- University of Bologna Institute of Advanced Studies Visiting Fellowship, 2018  
- Missouri S&T Faculty Excellence Award, 2016  
- American Concrete Institute Fellow

**Selected Academic Activities or Research Projects**  
- Performance of Earthquake-Damaged Reinforced Concrete Bridges with Repaired Columns, USDOT/MATC  
- Doctoral Training in Civil Infrastructure Condition Assessment, Sustainability, and Resiliency, GAANN Program  
- Active Microwave Thermography for Nondestructive Evaluation of Infrastructure: A Multi-Physics Based Approach

**Selected Publications and Presentations**

D’Antino, T., Foccaci, F., Sneed, L.H., and Pellegrino, C.,  

Yang, Y., Sneed, L.H., Morgan, A., Saiidi, M.S., and Belarbi, A.,  

Sneed, L.H., D’Antino, T., Carloni, C., and Pellegrino, C.,  

D’Antino, T., Carloni, C., Sneed, L.H., and Pellegrino, C.,  
Sanjay Tewari

Assistant Teaching Professor
MSU PROGRAM AND WATER RESOURCES ENGINEERING

Ph.D., civil engineering, Texas A&M University

Scholarly Focus, Teaching or Research Areas
Teaching undergraduate/graduate courses on wastewater/water treatment, fluid mechanics and water-resources; research interests are electro-chemical processes such as capacitive deionization, electrokinetics, electro-coagulation and desalination

Honors or Awards
• Crying Towel Award, Louisiana Tech University, 2016 and 2013
• Mills Scholarship, Texas Water Resources Institute, Texas A&M University, 2010
• Mickey Leland Environmental Intern, Texas Commission on Environmental Quality, 2005
• GATE Graduate Research Fellowship, India, 2000

Selected Academic Activities or Research Projects
• Combined Effect of Sea-level Rise and Coastal Land Subsidence – Identification of Critical Transportation Infrastructure At-risk in Coastal SPTC Region, Southern Plains Transportation Center, U.S. Department of Transportation Region 6 Regional University Transportation Center, 2017-18
• Coastal Protection and Restoration Authority through the RESTORE Act Center of Excellence for Louisiana, Protecting Subsurface Freshwater Using Electrokinetic Barriers Against Seawater Intrusion in Coastal Louisiana, 2017-18
• Corrosion Map for Metal Pipes in Coastal Louisiana, Louisiana Department of Transportation and Development, Louisiana Transportation Research Center, 2016-17

Selected Publications and Presentations


Jeffery Thomas

Associate Teaching Professor
MSU PROGRAM AND STRUCTURAL ENGINEERING

Ph.D., engineering mechanics, Missouri University of Science and Technology

Scholarly Focus, Teaching or Research Areas
Computer-based student assessment, online content delivery, measurement of student engagement

Honors or Awards
• Faculty Excellence in Teaching, Missouri State University, 2018
• Faculty Achievement Award, Missouri S&T, 2011
• Missouri S&T eFellow, 2010

Selected Publications and Presentations


WileyPLUS Learning Environment Containing 2,000 Reading Questions, 2500 Problems, 1100 Tutorials and 770 videos.

Educational Websites used by 630,000 people from 204 Countries.

More than 4.4 million hours of student and faculty use of media in WileyPLUS Learning Environment.
Jianmin Wang

Professor
ENVIRONMENTAL ENGINEERING
Ph.D., civil engineering, University of Delaware

Scholarly Focus, Teaching or Research Areas
Sustainable wastewater treatment and reuse; nanoparticle ecotoxicity; fate and transport of heavy metals in the environment

Honors or Awards
• CAPEES Best Paper Award
• Faculty Research Award

Selected Academic Activities or Research Projects
• Development of Robust Technologies for Advanced Wastewater Treatment and Reuse, U.S. Army
• Understanding and Modeling of the Metal Leaching Process From Coal Fly Ash, EPRI

Selected Publications and Presentations


Yang Wang

Assistant Professor
ENVIRONMENTAL ENGINEERING
Ph.D., energy, environmental and chemical engineering, Washington University in St. Louis

Scholarly Focus, Teaching or Research Areas
Air pollution control, particulate matter, aerosol measurement, instrumentation development, functional nanoparticle synthesis, combustion

Honors or Awards
• Ph.D. Award, Gesellschaft für Aerosolforschung (GAeF), European Aerosol Assembly, 2019

Selected Academic Activities or Research Projects
• Measurement of Sub 3 nm Particles From High Temperature Aerosol Sources, University of Helsinki, Tsinghua University, and University of Connecticut
• Rapid Measurement of Aerosol Size Distribution During Transient Aerosol Processes, Washington University, St. Louis, and Brookhaven National Laboratory
• Combustion Synthesis of Functional Nanomaterials, Washington University in St. Louis

Selected Publications and Presentations


Chenglin Wu
Assistant Professor
STRUCTURAL ENGINEERING
Ph.D., engineering mechanics, University of Texas at Austin
Ph.D., civil engineering, Missouri University of Science and Technology

Scholarly Focus, Teaching or Research Areas
Nano-mechanics, nanomaterials, nanomanufacturing, machine learning assisted material design and characterization, 3D printing of infrastructure materials, sensing and multifunctional materials

Honors or Awards
• Best Paper Awards, Society of Engineering Science, 2019
• Best Poster, ASME 2019 International Mechanical Engineering Congress and Exposition, Salt Lake City, Utah, 2019

Selected Academic Activities or Research Projects
• Atomic-layer Dependent Adhesion of Two-dimensional Transitional Metal Carbides (MXenes), NSF
• 3D Printed FRP-Concrete-Steel Composite Hollow Core Bridge Column, USDOT
• Wireless Sensing Platform Using Low-dimensional Nanocomposites, USDOT
• Wireless Crack Sensing for Bridge Structures, MoDOT

Selected Publications and Presentations


Grace Yan
Assistant Professor
STRUCTURAL ENGINEERING
Ph.D., engineering mechanics, Harbin Institute of Technology, China

Scholarly Focus, Teaching or Research Areas
Computational wind engineering, improvement of risk awareness and decision-making of natural hazards through virtual reality animation, wind hazard mitigation and community resilience, structural health monitoring and condition assessment

Honors or Awards
• Missouri Accelerated Research Award, 2019
• UTEP Outstanding Research Performance Award, 2014
• NSF Fellow for ENHANCE, 2013
• TRB Minority Faculty Mentor, 2013
• ASCE ExCEEd Fellow, 2016

Selected Academic Activities or Research Projects
• CoPe EAGER: Coastal Community Resilience Bonds to Enable Coupled Socio-Physical Recovery, NSF
• Damage and Instability Detection of Civil Large-scale Space Structures Under Operational and Multi-hazard Environments Based on Change in Macro-geometrical Patterns/Shapes, NSF
• Graduate Assistance in Areas of National Need (GAANN): Doctoral Training in Civil Infrastructure Condition Assessment, Sustainability and Resiliency, DOE

Selected Publications and Presentations


Xiong Zhang

Associate Professor
 GEOTECHNICAL ENGINEERING

Ph.D., civil engineering (geotechnical engineering), Texas A&M University

Scholarly Focus, Teaching or Research Areas
Unsaturated soil mechanics, advanced testing techniques, constitutive modeling, numerical methods and modeling, remote sensing, expansive and collapsible soils, frozen ground engineering, permafrost degradation, frost heave and thaw weakening, image analysis and computer vision

Honors or Awards
• International Award for Innovation in Unsaturated Soil Mechanics, Technical Committee on Unsaturated Soils (TC106) within the International Society for Soil Mechanics and Geotechnical Engineering, 2016
• Keynote Speaker, 7th Asia-Pacific Conference on Unsaturated Soils, 2019, Nagoya, Japan
• Keynote Speaker, 4th International Conference on Transportation Soil Engineering in Cold Regions, 2019, St. Petersburg, Russia
• Keynote Speaker, GEO-Omaha 2020, 37th Annual Geotechnical Conference, Omaha, Neb.

Selected Academic Activities or Research Projects
• Navigating the New Arctic Track 1: Collaborative Research on Sociodemographic, Cultural, and Infrastructure Resilience and Adaptation under the Effects of Permafrost Degradation and Coastal Erosion, NSF, 2019-24
• National Center for Transportation on Infrastructure Durability and Life-extension (TriDurLe), USDOT, 2019-22
• Development of Design Method for H2Ri Wicking Fabric in Pavement Structures: Phase II, TenCate Geosynthetics, Georgia, 2019-21

Selected Publications and Presentations


Adjunct Faculty

Daniel Abbott
MECHANICS
Engineering mechanics: statics, Materials testing, introduction to engineering design

Robert Holmes Jr.
WATER RESOURCES/USGS
P.E., F.ASCE, F.EWRI, D.WRE
Chief, Hydrodynamics Branch, U.S. Geological Survey (USGS)
Water resources engineering, hydrologic modeling

Mary Ann Koen
MECHANICS
Engineering mechanics: statics

Heath Pickerill
ARCHITECTURAL ENGINEERING
Director, Missouri Local Technical Assistance Program and Rural Transit Assistance Program

Polly Scott-Showalter
GREEN CONSTRUCTION
P.E., LEED AP
Construction engineering and management, sustainable design and construction

Mike Sneed
TRANSPORTATION ENGINEERING
Traffic Engineer, P.E.
Highway design, analysis, and planning

Robert Tucker
ENVIRONMENTAL ENGINEERING AND GEOLOGY
Tunnel detection in Iraq; deployable baffled bioreactors for army trials of new equipment; adobe blocks for theater building materials
Oerther elected chair of ASEE policy division

Dr. Daniel Oerther, professor of environmental health engineering, was elected to a three-year term as the chair of the Engineering and Public Policy Division of the American Society for Engineering Education (ASEE).

The primary objectives of the division include promoting an understanding of:
• public policy fundamentals
• the implications of public policy on emerging technologies
• the process of developing public support for emerging technological solutions to societal grand challenges.

Additional objectives include promoting interaction between public policy decision makers and engineering faculty, encouraging faculty to contribute to policy, and promoting public policies that are supportive of engineering education.

Assessing tornado damage to improve building codes

In the wake of a tornado outbreak that devastated communities across Missouri in 2019, Missouri S&T structural engineer Dr. Guirong (Grace) Yan, assistant professor of structural engineering, and three of her Ph.D. students traveled to Jefferson City to assess the damage of the EF3 tornado that swept through that community. Yan’s research on the wind pressure of tornadoes is helping develop new models for more tornado-resistant building design. She hopes her research will be used to strengthen building codes for municipalities. She is director of the Wind Hazards Mitigation Laboratory (WHAM) at Missouri S&T.

Schonberg named Fulbright Specialist

The U.S. Department of State’s Bureau of Educational and Cultural Affairs and World Learning named Dr. William Schonberg, professor of civil, architectural and environmental engineering at Missouri S&T, to the roster of Fulbright Specialists. Schonberg’s three-year tenure as a Fulbright Specialist runs through Oct. 11, 2022.

Fulbright specialists are recognized experts in their fields who are matched with projects designed by host institutions in more than 150 countries around the world. When the host institutions identify a national need and apply to the Fulbright Commission and U.S. Embassy in their country, they can name a specialist to work on their project. If no one specific is requested, the specialists themselves can express interest in the projects. All Fulbright Specialist projects must be a minimum of 14 days and a maximum of 42 days.

This is not Schonberg’s first involvement with Fulbright. In 2018, he was named a Fulbright Distinguished Chair in Advanced Science and Technology. Under that appointment, Schonberg worked for several months with scientists at the Defence Science and Technology group, a government agency in Australia, researching the effects of physical attacks on land vehicles.
The Clayco Advanced Construction and Materials Lab (ACML), a 14,800-square-foot expansion of the High Bay Structures Lab, is scheduled to be completed summer 2020.

A special thank you to Nucor-Yamato Steel Co. for their donation of more than 85 tons of structural steel, produced and supplied by three company facilities; the beams and channel from Nucor-Yamato Steel in Blytheville, Ark.; the tube from Nucor Tubular Products in Marseilles, Ill.; and the joist and decking from Nucor Vulcraft in Fort Payne, Ala.

Tom Sieckhaus, CE’88, (above left) executive vice president of Clayco Inc., the lab’s naming donor, toured the construction site with Dr. Joel Burken, Curators’ Distinguished Professor and chair of the CArEE department (above right).