



01 Jan 2018

2018 Scholarly Productivity Report

Missouri University of Science and Technology

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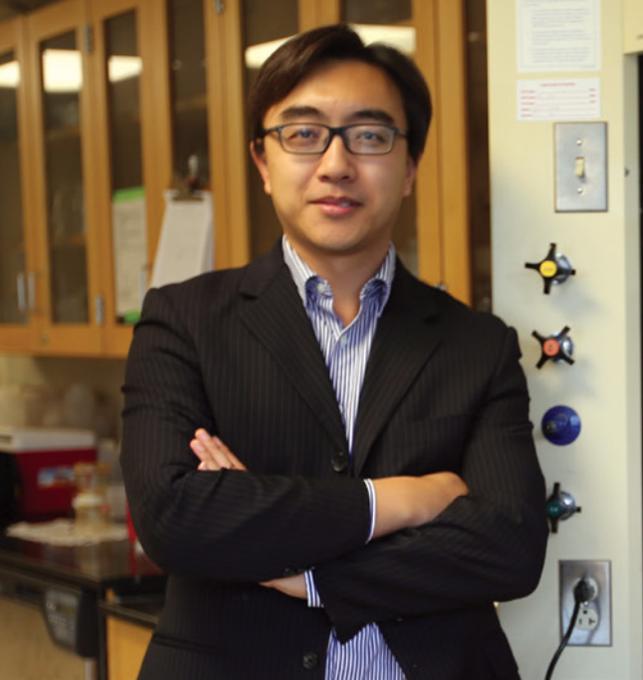
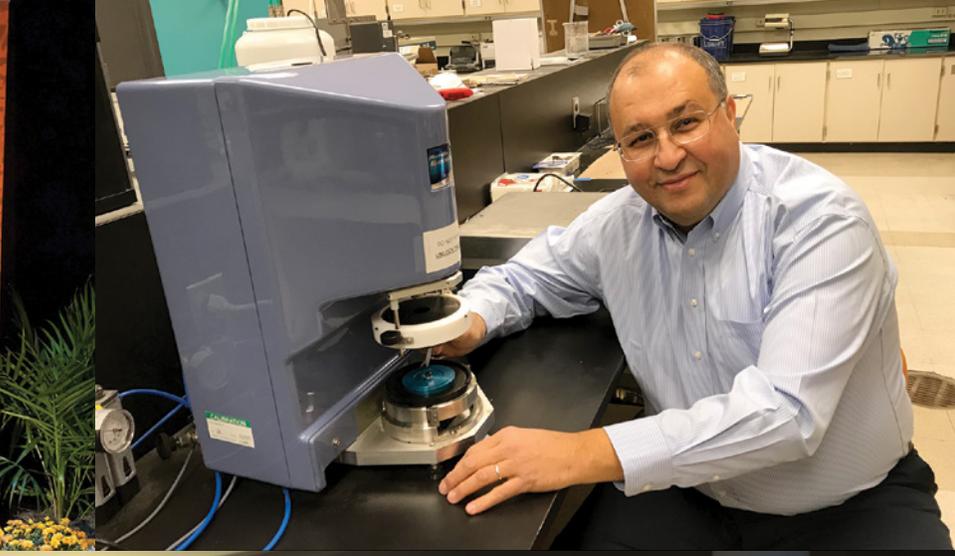


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2018

Scholarly
Productivity
Report

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MISSOURI S&T

Civil, Architectural and
Environmental Engineering

FROM THE CHAIR

Joel G. Burken
Ph.D., P.E., BCEE, F.AEESP

The civil, architectural and environmental engineering department had a notable year with increased productivity in nearly all aspects of our scholarly work, and we are thrilled to share that in our Scholarly Productivity Report for 2018.

Our team saw increases in enrollment (topping 600 students in the fall), publications, student productivity, research expenditures, new awards and national visibility. We also continued to make progress on our strategic plan, *Vision 2020*. We started this endeavor in 2011, and as we move closer to 2020, we continue to position our department on the front line of excellence for future students.

Our team continues to grow, and that, of course, expands the pool of talents that contribute to the education of our next generation of Miner alumni.

We welcomed three new team members, and we look for all three to lead us into new research and educational areas.



• **Dr. Islam El-adaway** joined us as the Hurst-McCarthy Professor. Dr. El-adaway, formerly an associate professor of civil and environmental engineering at the University of Tennessee, is a fellow of both ASCE and the Institution of Civil Engineers (UK), is a licensed professional engineer and has received multiple awards for teaching and research.

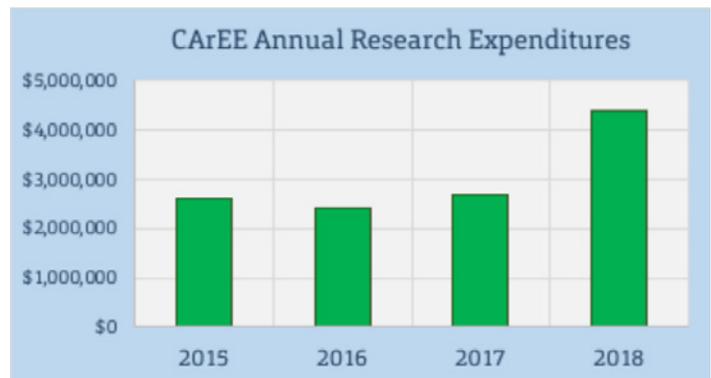
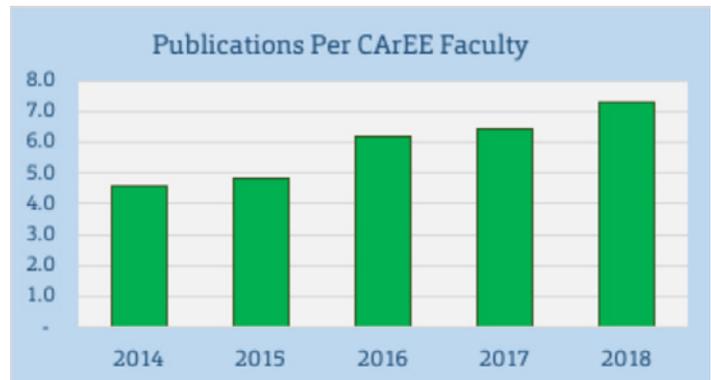


• **Dr. Guney Olgun** joined our team as an assistant professor. Dr. Olgun was an assistant research professor at Virginia Tech, where he earned a Ph.D. in 2009. His research interests include energy geotechnology, geothermal foundations, earthquake engineering and seismic hazard mapping. He has published over 40 articles and taught multiple courses on these topics.



• **Dr. Sanjay Tewari** joined the department as an assistant teaching professor to strengthen our cooperative program with Missouri State University in Springfield, Mo. Dr. Tewari was an assistant professor at Louisiana Tech University. His expertise is in solving challenges associated with water and wastewater. His research focuses on electrochemistry applications in greywater/water reuse as well as resource recovery and infrastructure resiliency.

We also celebrate a strong year of production, with 157 peer-reviewed journal articles published by our faculty and students (page 7), as well as many notable international keynote talks and presentations (page 19 and 23).



Research productivity increased 62 percent over 2017 to \$4.4 million. We graduated 13 Ph.D. students in 2018. Many of them started their academic careers as professors or postdoctoral researchers at peer institutions in the U.S. or internationally.

Our faculty received several national and international awards, ranging from notable research breakthroughs to career recognition for accomplishments in teaching, service and research (page 29).

Our research and educational facilities combined with such a talented faculty team will undoubtedly create even more opportunities for our graduates to go out and **change the world** as Miner alumni.

If you have any questions about the exciting things happening in Rolla or about our future vision of civil, architectural and environmental engineering at Missouri S&T, please contact me and take any opportunity to stay engaged with our CAEE team.

Sincerely,
Joel G. Burken
Chair and Curators' Distinguished Professor
Email: burken@mst.edu

CHAIR & ASSISTANT CHAIRS



Joel Burken

Ph.D., P.E., BCEE, F.AEESP
Department Chair and
Curators' Distinguished
Professor,
Civil, Architectural and
Environmental Engineering

Education:

Ph.D. Civil and Environmental
Engineering, University of Iowa

Research Interests:

Phytoforensics, Phytoremediation
and natural treatment systems,
Biological wastewater treatment,
Constructed wetlands,
Green remediation



Stuart Baur

Ph.D., A.I.A.
Assistant Chair and
Associate Professor,
Architectural Engineering

Education:

Ph.D. Civil Engineering,
Missouri S&T

Research Interests:

Design cost effective clean
alternative energy, Develop new
building technologies and
practices through the use of
materials and methodology,
Generate intelligent responsive
building systems



Mark Fitch

Ph.D.
Assistant Chair and
Associate Professor,
Environmental Engineering

Education:

Ph.D. Chemical Engineering,
University of Texas at Austin

Research Interests:

Constructed wetlands/
Biochemical reactors for metals
removal, Biofiltration/Membrane
biofiltration, Nutrient uptake
in streams



Eric Showalter

Ph.D., P.E.
Assistant Chair and
Teaching Professor,
Civil Engineering
Director, Advising Center

Education:

Ph.D. Civil Engineering,
Purdue University

Research and

Teaching Interests:

Information technology
applications in construction,
Environmental remediation,
Productivity simulation, Cost
effectiveness of technology

GRADUATE PROGRAMS & ADVISING



Cesar Mendoza

Ph.D.
Associate Professor,
Water Resources Engineering
Associate Chair, Graduate
Studies and Advising

Education:

Ph.D. Civil Engineering,
Colorado State University

Research Interests:

Hydraulics, Hydrology,
Fluid mechanics, Sediment
transport, Stream mechanics,
Environmental hydraulics,
Mathematical modeling



William Schonberg

Ph.D., P.E., F.ASCE, F.ASME,
Assoc F.AIAA
Professor, Civil, Architectural
and Environmental
Engineering

Assistant Chair, Distance
Education and Advising

Education:

Ph.D. Civil Engineering,
Northwestern University

Research Interests:

Armor/anti-armor and penetration
mechanics, Spacecraft
vulnerability/survivability,
Spacecraft shielding against
meteoroid and orbital debris
impacts, Hypervelocity impact
phenomena, Building collapse/
rubble modeling

EMERITUS FACULTY

Jerry Bayless

Associate Professor
Emeritus

Franklin Cheng

Professor Emeritus

Roger LaBoube

Curators' Teaching
Professor Emeritus

Rodney Lentz

Associate Professor
Emeritus

Charles Morris

Associate Professor
Emeritus

Thomas Petry

Professor Emeritus

Shamsher Prakash

Professor Emeritus

David Richardson

Chancellor's Professor
and Associate Professor
Emeritus

Richard Stephenson

Professor Emeritus

Jerome Westphal

Professor Emeritus

Wei-Wen Yu

Curators' Professor
Emeritus

CARE ENGINEERING FACULTY



Daniel Abbott

Lecturer, Mechanics

Education:

M.S. Mechanical Engineering,
Missouri S&T

Courses Taught:

Engineering Mechanics: Statics,
Materials Testing, Introduction
to Engineering Design



Magdy Abdelrahman

Ph.D., P.E.

Missouri Asphalt Pavement
Association (MAPA)
Endowed Professor

Education:

Ph.D. Civil Engineering,
University of Illinois at
Urbana-Champaign

Research Interests:

Infrastructure sustainability and
recycling of asphalt pavement,
Modified asphalt binders, Quality
control/assurance, Road materials
and construction, Design and
characterization of asphalt binders
and mixtures, Pavement design
and analysis, Advanced materials
characterization and modeling,
and Environmental aspects of
road material recycling



Genda Chen

Ph.D., P.E., F.ASCE

Robert W. Abnett Distinguished
Professor, Civil Engineering

Education:

Ph.D. Civil Engineering,
State University of New York
at Buffalo

Research Interests:

Structural health monitoring,
Interface mechanics and
deterioration of composite
structures, Adaptive passive
dampers and systems, Multi-
hazards assessment and
mitigation, Forensic study,
Seismic analysis and retrofit,
Soil-structure interaction,
Bridge engineering



Wen Deng

Ph.D.

Assistant Professor,
Geotechnical Engineering

Education:

Ph.D. Geosciences,
Iowa State University

Research Interests:

Multiphase flow, Chemical and
thermal transport, Microbial
growth in porous and fractured
media, Areas of geo-energy
recovery, Waste sequestration,
Environmental remediation



Islam El-adaway

Ph.D., P.E., C.Eng., F.ASCE, F.ICE
Hurst/McCarthy Professor of
Construction Engineering
and Management

Education:

Ph.D. Civil Engineering,
Iowa State University

Research and Teaching Interests:

Modeling and simulation;
Sustainable infrastructure,
resilient hazard, energy
contractual and dispute,
planning, safety, decision and
risk management; Engineering
education and ethics



Mohamed ElGawady

Ph.D.

Professor and Benavides
Faculty Scholar,
Structural Engineering

Education:

Ph.D. Structural Engineering,
EPFL, Swiss Federal Institute
of Technology, Lausanne,
Switzerland

Research Interests:

Seismic behavior of unreinforced
masonry (URM) structures,
Application of Fiber Reinforced
Polymers (FRP) in strengthening
and repair of masonry/reinforced
concrete structures, Seismic
behavior of reinforced concrete
bridges



Dimitri Feys

Ph.D.

Assistant Professor,
Materials Engineering

Education:

Ph.D. Civil Engineering,
Ghent University, Ghent, Belgium

Research Interests:

Behavior of highly workable
concrete in the fresh state,
Rheology of complex materials
and suspensions, Suspension
flow and sedimentation, Fluid
mechanics and flow modeling,
Concrete made with recycled
materials and advanced
sustainability



William Gillis

Ph.D., P.E., PMP, LEED AP,
M.ASCE, M.ASHRAE

Assistant Teaching Professor,
Civil and Architectural
Engineering

Education:

Ph.D. Engineering Management,
Missouri S&T

Research and Teaching Interests:

Building systems and system
efficiency, Green building design
and construction, Building
commissioning, Indoor air quality



XianBiao Hu

Ph.D.
Assistant Professor,
Transportation Engineering
Education:
Ph.D. Transportation Engineering,
University of Arizona
Research Interests:
Smart transportation systems
design, development and
deployment, Big data analytics
and applications in transportation
engineering, Incentive-based
travel behavior research,
Transportation system modeling
and simulation, Driving safety and
insurance telematics, Performance
evaluation and traffic operation



Kamal Khayat

Ph.D., P.E., F.ACI, F.RILEM
Vernon and Maralee Jones
Professor, Materials
Engineering
Director, Center for
Infrastructure Engineering
Studies
Education:
Ph.D. Civil Engineering,
University of California, Berkeley
Research Interests:
Design and performance of
advanced structural materials,
including high-performance
concrete with adapted rheology,
self-consolidating concrete,
Repair and rehabilitation of
civil engineering infrastructure,
Durability and deterioration
of cement-based materials in
aggressive environments



Nicolas Ali Libre

Ph.D.
Assistant Teaching Professor,
Structural Engineering
Education:
Ph.D. Civil Engineering,
University of Tehran, Iran
Research and Teaching Interests:
Computational mechanics and
applied mathematics, Meshfree
numerical methods for partial
differential equations, Radial
Basis Functions collocation
method, Ill-conditioned systems
of linear equations, Wavelet-based
adaptive methods, Advanced
cement-based materials for
sustainable construction,
Rheological and mechanical
properties of fiber reinforced
concrete, Non-destructive
evaluation of concrete properties



Jenny Liu

Ph.D., P.E.
Professor,
Materials and
Pavement Engineering
Education:
Ph.D. Civil Engineering,
Texas A&M University
Research Interests:
Infrastructure Materials —
Engineering characterization
and modeling of asphalt cement,
Hot-mix asphalt mixtures,
Granular and stabilized bases,
Portland cement concrete, and
Other infrastructural materials,
Pavement Engineering —
Pavement design and testing,
Pavement preservation, repair
and rehabilitation, Non-destructive
testing, Pavement construction,
and Pavement management
system (PMS)



Hongyan Ma

Ph.D.
Assistant Professor,
Materials Engineering
Education:
Ph.D. Civil Engineering,
Hong Kong University of
Science and Technology
Research Interests:
Hydration kinetics of (blended)
cementitious materials,
Microstructural characterization
and modeling of cement paste,
interfacial transition zone and
mortar/concrete, Measuring
and multi-scale modeling of
transport properties of concrete,
Mechanisms and properties of
novel construction/rehabilitation
materials, Magnesia-phosphate
cement (MPC) and MPC-based
functional materials



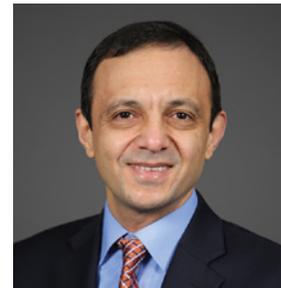
John Myers

Ph.D., P.E., F.ACI, F.ASCE,
F.IIFC, F.TMS
Professor, Structural
Engineering
Associate Dean, College of
Engineering and Computing
Director, High-Bay Laboratory
Education:
Ph.D. Civil Engineering,
University of Texas at Austin
Research Interests:
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 their
durability performance



Daniel Oerther

Ph.D., P.E., BCEE, CEng,
CEHS, D.AAS, M.CIEH, CEP,
CEnv, F.AAN, F.RSA, F.RSPH
Professor, Environmental
Health Engineering
Education:
Ph.D. Environmental Engineering,
University of Illinois
Research Interests:
Environmental biotechnology
and sustainable development
with a special emphasis on water,
sanitation and hygiene (WaSH);
Food safety, security and nutrition;
and Poverty alleviation using
design thinking and social
entrepreneurship



Guney Olgun

Assistant Professor,
Geotechnical Engineering
Education:
Ph.D., Civil and Environmental
Engineering, Virginia Polytechnic
Institute and State University
Research and Teaching Interests:
Energy geotechnology, Geothermal
foundations, Geotechnical
earthquake engineering, Seismic
hazard mapping, Liquefaction,
Multi-scale characterization of
geomaterials, Soil erosion, Deep
foundations, Ground improvement
and soil reinforcement, Soil-
foundation-structure interaction,
Advanced numerical modeling,
Disaster resilience and risk
management

CARE ENGINEERING FACULTY (CONTINUED)



Lesley Sneed

Ph.D., P.E., F.ACI
Associate Professor and
Stirrat Faculty Scholar,
Structural Engineering
Education:
Ph.D. Civil Engineering,
Purdue University
Research Interests:
Reinforced and prestressed
concrete structural members
and systems, Structural models
and experimental methods,
Innovative methods of repair
and strengthening of structures
subjected to seismic loading or
other extreme hazards, Structural
hazard mitigation, Design codes
and construction specifications
for structural concrete



Sanjay Tewari

Assistant Teaching Professor,
MSU Program/Environmental
and Water Resources
Engineering
Education:
Ph.D. Civil Engineering,
Texas A&M University
Research and Teaching Interests:
Capacitive deionization,
Electrokinetic barriers and
remediation, Greywater/water
reuse, Resource recovery,
Water quality, Geoenvironmental
processes, Bio-filters,
Electrochemical processes,
Environmental separation
processes, Sustainability,
Infrastructure resiliency,
Engineering education



Jeffery Thomas

Ph.D., P.E.
Associate Teaching Professor,
Structural Engineering
Education:
Ph.D. Engineering Mechanics,
Missouri S&T
Research and Teaching Interests:
Engineering education, Mechanics
of biological materials, Design
of percussion instruments,
Residential construction



Jianmin Wang

Ph.D., P.E.
Professor,
Environmental Engineering
Education:
Ph.D. Civil Engineering,
University of Delaware
Research Interests:
Sustainable technologies for
advanced wastewater treatment,
Synergistic toxic effect of
nanoparticles and heavy metals,
Fate and transport of heavy metals
in natural and engineered systems



Chenglin Wu

Ph.D.
Assistant Professor,
Structural Engineering
Education:
Ph.D. Engineering Mechanics,
The University of Texas at Austin
Ph.D. Civil Engineering,
Missouri S&T
Research Interests:
Multi-scale experimental
mechanics and numerical
modeling, Mechanics of adhesion
and friction, Interfacial fracture
mechanics, Composite materials,
Microelectronic packaging,
Nano indentation of thin films and
micro-pillars, Seismic modeling
in elastic/poroelastic media,
Waveform inversion/optimization
method, Vision-based structural
health monitoring method



Grace Yan

Ph.D.
Assistant Professor,
Structural Engineering
Education:
Ph.D. Engineering Mechanics,
Harbin Institute of Technology,
China
Research Interests:
Resilient infrastructural systems
in multi-hazard environments,
Structural health monitoring,
Structural damage detection,
Wireless sensor networks,
Advanced signal processing,
Nonlinear system identification
and damage detection, Model
updating of structural FEMs,
Structural vibration control,
Smart materials and structures



Xiong Zhang

Ph.D., P.E.
Associate Professor,
Geotechnical Engineering
Education:
Ph.D. Civil Engineering,
Texas A&M University
Research Interests:
Advanced testing techniques for
geo-material characterization,
Modeling of coupled hydro-
chemo-thermo-mechanical
behavior of geo-materials,
Numerical methods and
modeling, Geothermal and
ground source heat pump systems,
Soil structure interaction,
Foundation on expansive and
collapsible soils, Geotechnical
applications in pavement
engineering, Frozen ground
engineering, Remote sensing
for geo-engineering applications

STAFF

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Marsha Grayer
Becky Callen
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Advising Center

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Jody Seely

Engineering and Technical

Brian Swift
Gary Abbott
John Bullock
Greg Leckrone

Research

Mike Lusher

Communications

Joann Stirtz

JOURNAL PUBLICATIONS

Peer reviewed & indexed

Abdelrahman, M.

Hemida, A., and **Abdelrahman, M.**, "A Threshold to Utilize Guayule Resin as a New Binder in Flexible Pavement Industry," *Journal of Engineering Research*, Vol. 8, No. 12-II, pp. 83-94, 2018, DOI: 10.9790/9622-0812028394, (Co-primary and advisor of primary author).

Dyer, T., **Abdelrahman, M.** and Cheng, Z.H., "Construction and Demolition Wastes," Section: Recovery of Materials and Energy from Urban Waste, *Encyclopedia of Sustainability Science and Technology*, Meteor Springer, 2018, DOI: 10.1007/978-1-4939-2493-6_118-3.

Baur, S.W.

Stanley, R.J., and **Baur, S.W.**, "Extended Targeted Academic Performance Assessments from Missouri University of Science and Technology Students with Project Lead the Way Course Experience," *Transactions on Techniques for STEM Education*, Vol. 4, No. 1, pp. 60-70, October-December, 2018.

Baur, S.W., and 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, pp. 75-85, October-December, 2018.

Burken, J.G.

Li, H., Yin, Z., Mao, Y., Manley, P.V., **Burken, J.G.**, Fahlgren, N., Shakoob, N., and Mockler, T., "Early Drought Plant Stress Detection with Bi-directional Long-term Memory Networks," *Photogrammetric Engineering and Remote Sensing*, Vol. 84, No. 7, pp. 459-468, 2018.

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Limmer, M.A., Wilson, J.L., Westenberg, D.J., Lee, A.L., Siegman, M., and **Burken, J.G.**, "Phytoremediation Removal Rates of Benzene, Toluene, and Chlorobenzene," *International Journal of Phytoremediation*, Vol. 20, No. 7, pp. 666-674, 2018.

Chen, G.

Guo, C., Fan, L., Wu, C., **Chen, G.**, and Li, W., "Ultrasensitive LPFG Corrosion Sensor with Fe-C Coating Electroplated on a Gr/AgNW Film," *Sensors and Actuators: B, Chemical*, Vol. 283, pp. 334-342, 2018.

Fan, L., Bao, Y., and **Chen, G.**, "Feasibility of Distributed Fiber Optic Sensor for Corrosion Monitoring of Steel Bars in Reinforced Concrete," *Sensors*, Vol. 18, No. 11, pp. 3722, 2018, DOI: 10.3390/s18113722.

Qu H., Li, T., and **Chen, G.**, "Multiple Analytical Mode Decompositions for Nonlinear System Identification from Forced Vibration," *Engineering Structures*, Vol. 173, pp. 979-986, 2018.

Wu, C., Taghvaei, T., Wei, C., Ghasemi, A., **Chen, G.**, Leventis, N., and Gao, W., "Multi-scale Progressive Failure Mechanism and Mechanical Properties of Nanofibrous Polyurea Aerogels," *Soft Matter*, Vol. 14, No. 38, 2018, DOI: 10.1039/c8sm01546e.

Chen, Y., Tang, F., Li, Z., **Chen, G.**, and Tang, Y., "Bridge Scour Monitoring Using Smart Rocks Based on Magnetic Field Interference," *Smart Materials and Structure*, Vol. 27, No. 8, 2018.

Fan, L., Tang, F., Reis, S., **Chen, G.**, and Koenigstein, M., "Corrosion Resistances of Steel Pipe Internally Coated with Enamel," *Corrosion*, Vol. 73, No. 11, pp. 1335-1345, 2018.

Tang, F., Chen, Y., Li, Z., **Chen, G.**, and Tang, Y., "Application of Fe-C Coated LPFG Sensor for Early Stage Corrosion Monitoring of Steel Bar in RC Structures," *Construction and Building Materials*, Vol. 175, pp. 14-25, 2018, DOI: 10.1016/j.conbuildmat.2018.04.187.

Qu, H., Li, T., and **Chen, G.**, "Adaptive Wavelet Transform: Definition, Parameter Optimization Algorithms, and Application for Concrete Delamination Detection from Impact Echo Responses," *Structural Health Monitoring*, 2018, <https://doi.org/10.1177/1475921718776200>.

Fan, L., Reis, S., **Chen, G.**, and Koenigstein, M., "Corrosion Resistance of Pipeline Steel with Damaged Enamel Coating and Cathodic Protection," *Coatings*, Vol. 8, No. 5, pp. 1-12, 2018, DOI: 10.3390/coatings8050185.

Qu, H., Li, T., and **Chen, G.**, "Synchro-squeezed Adaptive Wavelet Transform with Optimum Parameters for Arbitrary Time Series," *Mechanical Systems and Signal Processing*, Vol. 114, pp. 366-377, 2018, <https://doi.org/10.1016/j.ymssp.2018.05.020>.



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MissouriSandTCARe](http://www.facebook.com/MissouriSandTCARe)

Gou, H., Long, H., Bao, Y., **Chen, G.**, Pu, Q., and Kang, R., "Stress Distributions in Girder-arch-pier Connections of Long-span Continuous Rigid Frame Arch Railway Bridge," *ASCE Journal of Bridge Engineering*, 2018, DOI: 10.1061/(ASCE)BE.1943-5592.0001250.

Gou, H., Zhou, W., **Chen, G.**, Bao, Y., and Pu, Q., "In-situ Test and Dynamic Response of a Double-deck Tied-arch Bridge," *Steel and Composite Structures*, Vol. 27, No. 2, pp. 161-175, 2018, DOI: <https://doi.org/10.12989/scs.2018.27.2.161>.

Yan, G., Li, T., Feng, R., **Chen, G.**, Hua, X., and Duan, Q., "Detection of Nodal Snap-through Instability in Reticulated Shell Structures Using Tilt Sensing of Members," *Journal of Applied Nonlinear Dynamics*, Vol. 7, No. 1, pp. 25-44, 2018.

Gou, H., He, Y., Zhou, W., Bao, Y., and **Chen, G.**, "Experimental and Numerical Investigations of the Dynamic Responses of an Asymmetrical Arch Railway Bridge," *Journal of Rail and Rapid Transit*, 2018, DOI: 10.1177/0954409718766929.

Li, Z., Tang, Y., Tang, F., Chen, Y., and **Chen, G.**, "Elastic Buckling of Thin-walled Polyhedral Pipe Liners Encased in a Circular Pipe under Uniform External Pressure," *Thin-Walled Structures*, Vol. 123, pp. 214-221, 2018.

Qu, H., Li, T., and **Chen, G.**, "Influence Length of Wire Fracture and Wire-to-wire Interaction in Helically Wired Strands Under Axial Loads," *ASCE Journal of Bridge Engineering*, Vol. 23, No. 1, 2018.

Wang, Z., Ren, W., and **Chen, G.**, "Time-frequency Analysis and Applications in Time-varying/Nonlinear Structural Systems: A State-of-the-art Review," *Advances in Structural Engineering*, 2018, <https://doi.org/10.1177/1369433217751969>.

Deng, W.

Anbari, A., Chien, H., Datta, S.S., **Deng, W.**, Weitz, D.A., and Fan, J., "Microfluidic Model Porous Media: Fabrication and Applications," *Small*, Vol. 14, No. 18, pp. 1703575, 2018, DOI: 10.1002/smll.201703575.

Zhong, R., Guo, R., and **Deng, W.**, "Optical-fiber Based Smart Concrete Thermal Integrity Profiling: An Example of Concrete Shaft," *Advances in Materials Science and Engineering*, 2018, DOI: 10.1155/2018/9290306.

Shi, D., Wang, J., and **Deng, W.**, "Smart Building and Construction Materials," *Advances in Materials Science and Engineering*, 2018, DOI: 10.1155/2019/2432915.

El-adaway, I.

Salwa, F., **El-adaway, I.**, Perreau-Saussine, L., Wahab, M.A., and Hamed, T., "Analyzing Termination for Convenience Provisions under Common Law FIDIC Using a Civil Law Perspective," *ASCE Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, Vol. 10, No. 4, 0000279, pp. 1-16, 2018.

Ibrahim, A., and **El-adaway, I.**, "Managing Construction Projects through Dynamic Modeling: Reviewing Existing Body of Knowledge and Deriving Future Research Directions," *ASCE Journal of Management in Engineering*, Vol. 34, No. 6, 0000633, pp. 1-17, 2018.

Salwa, F., **El-adaway, I.**, Perreau-Saussine, L., Wahab, M.A., and Hamed, T., "Claims for Extension of Time and Additional Payment under Common Law FIDIC: Civil Law Analysis," *ASCE Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, Vol. 10, No. 4, 0000276, pp. 1-13, 2018.

Ibrahim, A., and **El-adaway, I.**, "First Attempt towards a Holistic Understanding of the Interdependent Rippled Impacts Associated with Out-of-sequence Work in Construction Projects: A System Dynamics Modeling Approach," Editor's Choice, Peer-reviewed Journal Paper, *ASCE Journal of Construction Engineering and Management*, Vol. 144, No. 9, 0001539, pp. 1-21, 2018.

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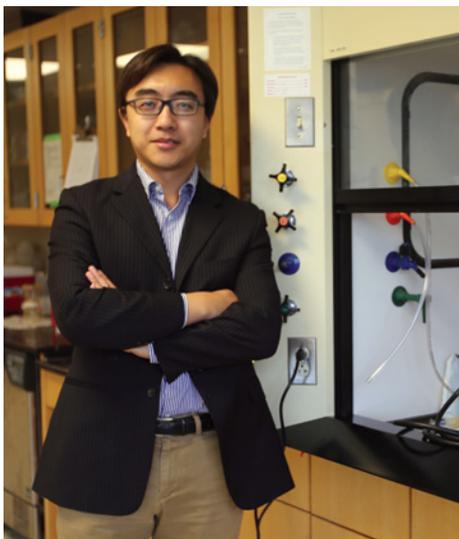
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Al-Jaberi, Z., **Myers, J.J.**, and ElGawady, M.A., "Out-of-plane Behavior of RM Walls Strengthened with FRCM Composite or NSM with Cementitious Adhesive," 9th International Conference on Fibre-Reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, July, 2018, 7 pages.

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Gheni, A., ElGawady, M.A., and **Myers, J.J.**, "New Eco-friendly Masonry Units for Better Thermal and Acoustic Insulation," Proceedings for the 10th Australasian Masonry Conference, Sydney, Australia, February, 2018. Published, 12 pages.

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Oerther, D.B.

Oerther, D.B., "Science, Technology, Engineering, Art, and Math (STEAM) Diplomacy: Preliminary Results from an Initial Pilot Course," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018.

Oerther, D.B., "Leveraging the NAM's 'Getting Nurses on Boards Coalition' to Promote NAE's 'Changing the Conversation' Campaign," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018.

Oerther, D.B., "Introduction to Public Health for Environmental Engineers: Results from a Three-year Pilot," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018.

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INVITED TALKS

Baur, S.

Baur, S., Developed and taught a short course titled, "Recycled Materials in Construction Applications," The Thirty-third Eighth International Conference on Solid Waste Technology and Management, Sponsored by the *Journal of Solid Waste Technology and Management* (JSWMT), March, 2018.

Baur, S., "Recycling Photovoltaic Panel Systems," Meramec Regional Planning Commission, St. James, MO, November, 2018.

Baur, S., "Educational Outcomes Research for Missouri S&T Students with and without Project Lead the Way Course Experience," Board of Curators Meeting, Rolla, MO, April, 2018.

Baur, S., "Sustainable Cities," State of Missouri Future City Competition, Rolla, MO, February, 2018.

Baur, S., "Architectural Engineering and Smart Technologies," Fort Leonard Wood Institute (FLI), United States Army Corps of Engineers (USACE), Construction Engineering Research Laboratory (CERL) and Missouri S&T, Rolla, MO, June, 2018.

Burken, J.G.

Burken, J.G., "Detecting Unexploded Ordinance through Changes in Plant Health," Homeland Defense and Security Information Analysis Center National Webinar, April, 2018.

Burken, J.G., "Plants as Bio-sentinels: What Mother Nature Can Tell Us About Our Exposed," Biomimicry Research and Innovation Seminar Series, University of Akron, Akron, OH, March, 2018.

Burken, J.G., "Vegetation Based Assessment Tools For Landfill Leachate Delineation and Treatment," Technical Development Series, Missouri Department of Natural Resources, Jefferson City, MO, June, 2018.

Burken, J.G., "Plants as Bio-sentinels," University of Western Cape, Cape Town, South Africa, July, 2018.

Burken, J.G., "Assessing our Exposed Plants as Bio-sentinels," Purdue University, West Lafayette, IN, February, 2018.

Chen, G.

Chen, G. and Hongya Q., "Short-time Continuous Wavelet Transform of the Response of Time-varying Systems," Presented at the 2018 International Conference on Sensor Networks and Signal Processing (SNSP 2018), Xi'an, China, October, 2018, (keynote presentation).

Chen, G., "High Performance Bridges with Sustained Materials, Automated Preservation, and Informed Decision: a Life-cycle Perspective," Presented at the 15th International Symposium on Structural Engineering (ISSE-15), Hangzhou, China, October, 2018.

Chen, G., "Sensor-enhanced Analysis and Behavior of Steel Beams in Fire," Presented at the 5th World Congress and Exhibition on Construction and Steel Structure (Steel Structure 2018), Los Angeles, CA, October, 2018, (keynote presentation).

Chen, G., "Enamel Coating for Steel Rebar in Concrete: Corrosion Barrier and Bond Enhancer," Presented at the World Congress of Materials Science and Engineering, Amsterdam, Netherlands, August, 2018, (keynote presentation).

Chen, G., "Identification of Nonlinear Oscillators with Multiple Analytical Mode Decompositions," Presented at the 7th World Conference on Structural Control and Monitoring, Qingdao, China, July, 2018.

Chen, G., "Automation and Informatics in Civil Engineering," Hong Kong Polytechnic University, Hong Kong, China, December, 2018.

Chen, G., "Emerging Roles of Automation and Informatics in Construction and Preservation of Civil Infrastructures," China Communication Construction Company, Beijing, China, December, 2018.

Chen, G., "High Performance Bridges with Sustained Materials, Automated Preservation, and Informed Decision: a Life-cycle Perspective," Zhejiang University, Shanghai, China, October, 2018.

Chen, G., "Enamel Coating for Steel Rebar in Concrete: Corrosion Barrier and Bond Enhancer," World Congress on Materials Science and Engineering, Amsterdam, Netherlands, August, 2018.

Chen, G., "Emerging Roles of Automation and Informatics in Civil Engineering," China Petroleum University, Beijing, China, July, 2018.

Chen, G., "Emerging Roles of Automation and Informatics in Civil Engineering," Central South University, Changsha, China, July, 2018.

Chen, G., "Emerging Roles of Automation and Informatics in Civil Engineering," Southwest Jiaotong University, Chengdu, China, July, 2018.

Feys, D.

Feys, D., "The Effect of Shear Rate on Rheological Properties of Cement Paste," Proceedings of the International RILEM Workshop on Rheological Measurements of Cement-based Materials, Arras, France, May, 2018.

Feys, D., "Rheology: The Link between Mix Design, Placement and Performance of Concrete," Research Seminar at University of Illinois at Arkansas, Fayetteville, AR, April, 2018.

 (continued on page 21)

CONFERENCE PAPERS (continued)

Schonberg, W.P.

Schonberg, W.P., "Rupture of Composite Pressure Vessels (COPVs) Following a Hypervelocity MMOD Particle Impact," Proceedings of the 2018 AIAA Sci-Tech Forum, Paper No. AIAA-2018-0231, Kissimmee, FL, January, 2018.

Sneed, L.H.

Sneed, L.H., D'Antino, T., Carloni, C., and Pellegrino, C., "Study of the Matrix-fiber Bond Behavior of Carbon and Glass FRCM Composites," In 9th International Conference on Fibre-reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, Part 1 pp. 330-337, July, 2018.

D'Antino, T., **Sneed, L.H.**, Carloni, C., and Pellegrino, C., "Numerical Analysis of PBO FRCM-Concrete Joints," In 9th International Conference on Fibre-reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, Part 1 pp. 338-343, July, 2018.

Aiello, M.A., and **Sneed, L.H.**, "Confinement of Existing RC and Masonry Columns with FRCM Composites: ACI-RILEM Provisions," In 9th International Conference on Fibre-reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, Part 2 pp. 106-113, July, 2018.

D'Antino, T., Gonzalez-Libreros, J.H., Pellegrino, C., Carloni, C., and **Sneed, L.H.**, "Performance of Different Types of FRCM Composite Applied to Concrete Substrate," In SHCC 2017: International Conference on Strain-hardening Cement-based Composites (SHCC4), Dresden, Germany, pp. 778-786, 2018, DOI: 10.1007/978-94-024-1194-2_89.

Gonzalez-Libreros, J.H., Sabau, C., **Sneed, L.H.**, Sas, G., and Pellegrino, C., "Effect of Confinement with FRCM Composites on Damaged Concrete Elements," In SHCC 2017: International Conference on Strain-hardening Cement-based Composites (SHCC4), Dresden, Germany, pp. 770-777, 2018, DOI: 10.1007/978-94-024-1194-2_88.

Tewari, S.

Tewari, S., and Manning, F., "Spatial Delineation of Corrosion Zones for Metal Culverts Based on Coastal Louisiana Soil Characteristics," Proceedings of 97th Annual Meeting of Transportation Research Board, Washington D.C., January, 2018, 17 pages.

Ahmed, M.A., and **Tewari, S.**, "Performance of Carbon Aerogel/Fiber Paper as Capacitive Deionization Electrodes under Variable Operating Conditions," World Environmental & Water Resources Congress, pp. 22-29, May, 2018.

Tewari, S., Ahmed, M.A., Tummala, C.M., "Generating Interest among Undergraduates towards Research in Environmental Engineering by Incorporating Novel Desalination Technology Based Hands-on Laboratory Assignments," Proceedings of ASEE 125th Annual Conference & Exposition, Salt Lake City, UT, June, 2018.

Yan, G.

Li, T.T., **Yan, G.**, Yuan, F.P. and Chen, G.D., "Tornado-induced Structural Responses on Large-scale Dome Structures," 2018 International Symposium on Computational Wind Engineering, Seoul, Korea, June, 2018.

Zhao, Y., **Yan, G.**, and Zhao, M., "CFD Simulation of Full-scale Multi-subvortex Tornadoes," 2018 International Symposium on Computational Wind Engineering, Seoul, Korea, June, 2018.

Li, Z., Honerkamp, R. and **Yan, G.**, "Influence of a Community of Buildings on Tornadic Wind Field," 2018 International Symposium on Computational Wind Engineering, Seoul, Korea, June, 2018.

Zhang, X.

Li, L., and **Zhang, X.**, "Deformation and Suction Variation of an Unsaturated Soil during Constant Water Content Triaxial Loading," The 7th International Conference on Unsaturated Soils, Hong Kong, China, August, 2018.

Li, L., **Zhang, X.**, and Li, P., "Soil Water Retention Surface Determination Using a New Triaxial Testing System," GeoShanghai International Conference 2018, Shanghai, China, May, 2018.

Xia, X. and **Zhang, X.**, "Accurate Automatic Detection of Coded Targets for Rapid Deformation Measurement in Triaxial Tests on Unsaturated Soil Specimens," The 7th International Conference on Unsaturated Soils, Hong Kong, China, August, 2018.

Xia, X., Luo, W., Yin, Z., and **Zhang, X.**, "Fully Automated and Accurate 3D Reconstruction of Unsaturated Soil Specimens," The 7th International Conference on Unsaturated Soils, Hong Kong, China, August, 2018.

Lin, C., and **Zhang, X.**, "Wicking Fabric Interactions with Different Soil Types," UNSAT2018 – the 7th International Conference on Unsaturated Soils, Hong Kong, China, August, 2018.

Lin, C., and **Zhang, X.**, "Numerical Simulation of Moisture Migration for a Flexible Pavement Installed with Wicking Fabric," GeoShanghai International Conference, Shanghai, China, May, 2018.

INVITED TALKS (continued)

Feys, D., "Why Placement is Critical for the Long-term Performance of (Self-consolidating) Concrete," Research Seminar, University of Illinois at Urbana Champaign, Champaign, IL, February, 2018.

Hu, X.

Hu, X., "Advancing Usage Based Insurance – A Contextual Driving Risk Modeling and Analysis Approach," World Transport Convention, Beijing, China, June, 2018.

Hu, X., "Building a Connected Mobility Management and Analytics-centered Smarter Transportation System," University of Arkansas, Fayetteville, AR, September, 2018, (invited seminar).

Khayat, K.H.

Khayat, K.H., "Concrete Pavement Incorporating Recycled Concrete Aggregate: The RE-CAST Experience," ACI Quebec and Eastern Ontario Chapter Annual Meeting, Sherbrooke, QC, Canada, December, 2018.

Khayat, K.H., "Recent Advances in the Design of Cost-effective UHPC with Adapted Rheology," 14th International Conference on Recent Advances in Concrete Technology and Sustainability Issues, Beijing, China, October/November, 2018, <http://ddl.escience.cn/f/QNV6>, (keynote presentation).

Khayat, K.H., "Effect of Rheological Properties on Quality of Formed Surfaces Cast with SCC and Superworkable Concrete," CBMA, Beijing, China, November, 2018.

Khayat, K.H., "Improving Flexural Performance of Ultra-high Performance Concrete by Rheology Control of Suspending Mortar," 2nd International Symposium on Ultra High-performance Concrete, Fuzhou, China, November, 2018, (keynote presentation).

Khayat, K.H., "Particle Packing and Mixture Design Approach for Eco-SCC," ACI Fall Convention, Las Vegas, NV, October, 2018.

Khayat, K.H., "Effect of Rheological Properties on Quality of Formed Surfaces Cast with SCC and Superworkable Concrete," Las Vegas, NV, October, 2018.

Khayat, K.H., "Design and Performance of Advanced Materials for Sustainable Infrastructure Development," Shenzhen University, Shenzhen, China, August, 2018.

Khayat, K.H., "Ultra High-performance Concrete with Adapted Rheology," Central South University, Changsha, China, August, 2018.

Khayat, K.H., "Rheology Control of High Strength Concrete and Effect on Performance," Tsinghua University, Beijing, China, May, 2018.

Khayat, K.H., "Analytical Approach to Predict Pressure Loss in Pumping Pipes," Tsinghua University, Beijing, China, May, 2018.

Khayat, K.H., "Recent Advances in Pumping of High Performance Concrete," 4th International Symposium on Design, Performance and Use of Self-consolidating Concrete, Changsha, China, May, 2018, (keynote presentation).

Khayat, K.H., "Rheological Measurements of Cement-based Materials," International RILEM Workshop, Arras, France, May, 2018.

Khayat, K.H., "Influencing Factors and Models to Predict Form Pressure Exerted by SCC," ACI Spring Convention, Salt Lake City, UT, March, 2018.

Khayat, K.H., "Feasibility of Using GFRP Reinforced UHPC Elements for Stay-in-place Formwork," ACI Spring Convention, Salt Lake City, UT, March, 2018.

Khayat, K.H., "Robustness of SCC Incorporating Different Viscosity-enhancing Admixtures," ACI Spring Convention, Salt Lake City, UT, March, 2018.

Khayat, K.H., "Surface Settlement of SCC – How Critical is it on Concrete Performance?" ACI Spring Convention, Salt Lake City, UT, March, 2018.

Khayat, K.H., "A Long Winding Road," Honorary Member, Chi Epsilon, Missouri S&T Chapter, Rolla, MO, April, 2018.

Khayat, K.H., "Use of Fiber-reinforced Self-consolidating Concrete to Enhance Serviceability Performance of Damaged Beams," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Myers, J.J.

Myers, J.J., "Recent Advances in Bridge Engineering in the State of Missouri and the United States of America," Special Presentation at Shibaura Institute of Technology, Tokyo, Japan, November, 2018.

Myers, J.J., "Microstructure and Mechanical Property Behavior of In-situ FRP Reinforcement Autopsied from In-service Bridge Structures," American Concrete Institute 2018 Fall Convention, Las Vegas, NV, October, 2018.

Myers, J.J., "Microstructure and Mechanical Property Behavior of FRP Reinforcement Autopsied from Bridge Structures Subjected to In-situ Exposure," 16th International Congress on Polymers in Concrete 2018 (ICPIC 2018), Washington, D.C., April/May, 2018.

Myers, J.J., "Bond Performance of Steel Reinforced Polymer (SRP) Subjected to Environmental Conditioning and Sustained Stress," 16th International Congress on Polymers in Concrete 2018 (ICPIC 2018), Washington, D.C., April/May, 2018.

Oerther, D.B.

Oerther, D.B., "Using STEMpathy to Improve CBPR to Achieve the UN SDGs," College of Engineering, Computing, and Applied Science, Clemson University, Clemson, SC, February, 2018.



INVITED TALKS (continued)

Oerther, D.B., "Scaling up CCRIF SPC," Stakeholder Retreat for CCRIF SPC, Miami, FL, March, 2018.

Oerther, D.B., "COAST for Sustainability," Strategic Retreat for CCRIF SPC, Miami, FL, March, 2018.

Oerther, D.B., "Some Thoughts on Licensure with an Emphasis on Food Safety," Childcare Fair, Rolla, MO, April, 2018.

Oerther, D.B., "Lessons from The Road Not Taken," Keynote Address to Undergraduate Research Symposium, Missouri University of Science and Technology, Rolla, MO, April, 2018.

Schonberg, W.P.

Schonberg, W.P., "Is It Engineering? Is It Art? Is It Both? Does It Matter?" 2018 STEM Carib Conference, University College of the Cayman Islands, Grand Cayman, BWI, October, 2018.

Schonberg, W.P., "Heavens! What a Mess! The Growing Problem of Space Debris," 2018 STEM Carib Conference, University College of the Cayman Islands, Grand Cayman, BWI, October, 2018.

Schonberg, W.P., "Large Satellite Constellations – Astronomer's Friend or Foe?" Wm Hrudehy/CARINA Caribbean Astronomy Conference, Grand Cayman, BWI, May, 2018.

Schonberg, W.P., "Be the Bridge: An Exploration of Physical as well as Metaphorical Bridges," TedxUCCI, University College of the Cayman Islands, Grand Cayman, BWI, March, 2018, <https://www.youtube.com/watch?v=nJ3h9CIW9ZI>.

Sneed, L.H.

Sneed, L.H., "Contribution of Externally Bonded FRMC to the Shear Strength of RC Beams – A Mechanical Model," ACI Fall 2018 Convention, Las Vegas, NV, October, 2018.

Sneed, L.H., "Repair of Earthquake-damaged Reinforced Concrete Bridges – Challenges and Solutions," Politecnico di Milano, Milan, Italy, July, 2018.

Sneed, L.H., "Repair of Earthquake-damaged Reinforced Concrete Bridges – Challenges and Solutions," University of Bologna, Bologna, Italy, July, 2018.

Sneed, L.H., "Navigating the Road to a Successful Academic Career," Purdue University, West Lafayette, IN, February, 2018.

Wang, J.

Wang, J., "Enhanced Nutrient Removal from Wastewater through an Intermittent Aeration Strategy," ENVr: Water Reuse and Recycling: Innovative Solutions for Treatment and Implementation, 256th ACS National Meeting and Exposition, Boston, MA, August, 2018.

Wang, J., "Why Should we Promote Low DO Aeration?" Fudan University, Shanghai, China, June, 2018.

Wang, J., "Enhancing Nutrient Removal Using iMLE Process," Shanghai University, Shanghai, China, June, 2018.

Wu, C.

Wu, C., "Multi-scale Experiment and Modeling on Failures of Microelectronic Materials," Invited Seminar, University of Missouri-Columbia, Columbia, MO, April, 2018.

Wu, C., "Novel Construction Equipment and Technologies," Invited Seminar, Kansas State University, Manhattan, KS, February, 2018.

Yan, G.

Yan, G., "Make Tornado Alley a Better Place to Live," National Institute of Standards and Technology (NIST), Washington, D.C., March, 2018.

BOOK CHAPTERS & SCHOLARLY MONOGRAPHS

Fitch, M.

Sochacki, A., Yadav, A.K., Srivastava, P., Kumar, N., **Fitch, M.**, and Mohanty, A., "Constructed Wetlands for Metals: Removal Mechanism and Analytical Challenges," Chapter 11 in Constructed Wetlands for Industrial Wastewater Treatment, Alexandros Stefanakis (Ed.), John Wiley & Sons, 2018, ISBN 978-1-119-26834-5.

Khayat, K.H.

Shi, C., Zhang, Z., and **Khayat, K.H.**, (Editors) RILEM Proceeding 122, 4th International Symposium on Design, Performance and Use of Self-consolidating Concrete, SCC'18, Changsha, China, May, 2018, pp. 361, ISBN: 978-2-35158-204-6.

Liu, J.

Shi, X., Liu, Z., and **Liu, J.**, "Proceedings of GeoShanghai 2018 International Conference: Transportation Geotechnics and Pavement Engineering," 2018, eBook, ISBN 978-981-13-0011-0.

Yan, G.

Yuan, F.P., **Yan, G.**, Honerkamp, R., Isaac, K.M. and Feng, R.Q., "Effects of Chamber Shape on Simulation of Tornado-like Flow in a Laboratory," Wind Engineering for Natural Hazards-modeling, Simulation, and Mitigation of Windstorm Impact on Critical Infrastructure, Edited by Aly Mousaad Aly and Elena Dragomirescu, American Society of Civil Engineers, 2018, ISBN: 0784481857, 9780784481851 https://books.google.com/books/about/Wind_Engineering_for_Natural_Hazards.html?id=m-wDugEACAAJ&source=kp_book_description.

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CONFERENCE PRESENTATIONS

→ & Seminars

Abdelrahman, M.

Abdelrahman, M., Missouri Asphalt Pavement Association Annual Meeting, Activity Update, Columbia, MO, January, 2018.

Chen, G.

Klegseth, M., Bao, Y., and **Chen, G.**, "Strain Measurement on the Surface of Diametrically Loaded Acrylic Sphere with a Distributed Fiber Optic Sensor," Presented at the 2018 SPIE Annual Symposium on Smart Structures/NDE, Denver, CO, March, 2018.

Qu, H., and **Chen, G.**, "Concrete Delamination Detection with Adaptive Wavelet Transform," Presented at the 2018 SPIE Annual Symposium on Smart Structures/NDE, Denver, CO, March, 2018.

Guo, C., Wu, C., and **Chen, G.**, "Graphene Coated LPFG Sensors for High Sensitivity Corrosion Monitoring," Presented at the 2018 SPIE Annual Symposium on Smart Structures/NDE, Denver, CO, March, 2018.

Deng, W.

Deng, W., Zeng C., Zhang Y., and Bai, B., "Experimental Study of the Resonance of Nonwetting Droplet in Constricted Capillary Tubes," AGU Fall Meeting, Washington, D.C., December, 2018.

ElGawady, M.A.

Abdulazeez, M., **ElGawady, M.A.**, "Seismic Performance of Hollow-core HC-FCS Columns having Inner Steel Tube with High Diameter-to-thickness Ratio," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018, <https://trid.trb.org/view/1497292>.

Wang, S., and **ElGawady, M.A.**, "The Influences of Mechanical Load on Concrete-filled FRP Tube Cylinders Subjected to Environmental Corrosion," 16th International Congress on Polymers in Concrete (ICPIC 2018), Washington, D.C., April/May, 2018, https://link.springer.com/chapter/10.1007/978-3-319-78175-4_76.

Sargon, S., Gomaa, E., Kashosi, C., **ElGawady, M.A.**, and Gheni, A., "Effect of Curing Temperatures on Zero-cement Alkali-activated Mortars," 16th International Congress on Polymers in Concrete (ICPIC 2018), Washington, D.C., April/May, 2018, https://link.springer.com/chapter/10.1007/978-3-319-78175-4_70.

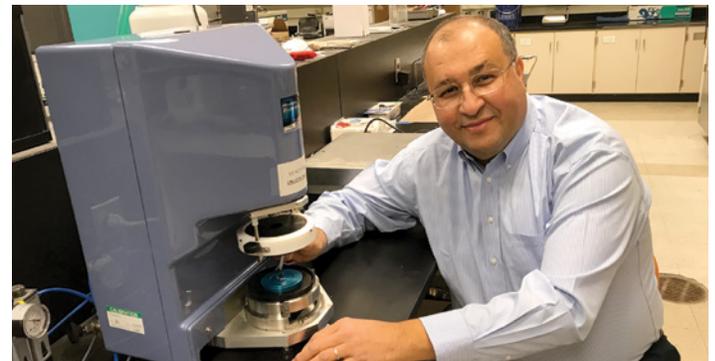
Gomaa, E., Sargon, S., Kashosi, C., Gheni, A., and **ElGawady, M.A.**, "Effect of Different Class C Fly Ash Compositions on the Properties of the Alkali-activated Concrete," 16th International Congress on Polymers in Concrete (ICPIC 2018), Washington, D.C., April/May, 2018, https://link.springer.com/chapter/10.1007/978-3-319-78175-4_69.

Gomaa, E., Sargon, S., Gheni, A., and **ElGawady, M.A.**, "Mechanical Properties of Alkali Activated Concrete Based Class C Fly Ash," 9th International Conference on Bridge Maintenance, Safety, and Management, Melbourne, Australia, July, 2018, <http://iabmas2018.org/downloads/IABMAS2018-Program-Book.pdf>.

Abdulazeez, M., Gheni, A., Colbet, N., and **ElGawady, M.A.**, "Seismic Performance and Retrofit Evaluation of Hollow-core Composite Bridge Columns," 9th International Conference on Bridge Maintenance, Safety, and Management, Melbourne, Australia, July, 2018, <http://iabmas2018.org/downloads/IABMAS2018-Program-Book.pdf>.

Abdulazeez, M., Gheni, A., Colbet, N., and **ElGawady, M.A.**, "Inelastic Response Evaluation of Precast Composite Columns under Seismic Loads," 11th U.S. National Conference Earthquake Engineering, Los Angeles, CA, June, 2018, <https://11ncee.org/images/11NCEE-Program-ONLINE.pdf>.

Abdulazeez, M., and **ElGawady, M.A.**, "Three-dimensional Numerical Analysis of Hollow-core Composite Building Columns," 16th International Congress on Polymers in Concrete (ICPIC 2018), Washington, D.C., April/May, 2018, https://link.springer.com/chapter/10.1007/978-3-319-78175-4_81.



Dr. Magdy Abdelrahman discussed asphalt-crumb rubber optimization and recycled rejuvenators, during the Missouri Asphalt Pavement Association Annual Meeting.

CONFERENCE PRESENTATIONS (continued)

Abdulazeez, M., and **ElGawady, M.A.**, "Flexural Rigidity Evaluation of Seismic Performance of Hollow-core Composite Bridge Columns," 16th International Congress on Polymers in Concrete (ICPIC 2018), Washington, D.C., April/May, 2018, https://link.springer.com/chapter/10.1007/978-3-319-78175-4_80.

Feys, D.

Galvez Moreno, D., **Feys, D.**, and Riding, K., "The Effect of Pressure on the Rheological Properties of Air-entrained Cement Paste," ACERS Cements Division Conference, State College, PA, June, 2018.

Ley Hernandez, A.M., Cook, R., **Feys, D.**, and Kumar, A., "The Link between Rheological Properties and Degree of Hydration of Different PCEs on Cement Pastes," ACERS Cements Division Conference, State College, PA, June, 2018.

Feys, D., "Controlling Fresh Properties of SCC: Why Mixing Energy and Placement Matter," ACI Spring Convention, Salt Lake City, UT, March, 2018.

Wehar, A., Galvez Moreno, D., **Feys, D.**, and Riding, K., "Influence of Pumping Parameters on the Freeze/Thaw and Scaling Resistance of Highly Workable Concrete," ACI Spring Convention, Salt Lake City, UT, March, 2018.

Hu, X.

Hu, X., "Building a Connected Mobility Management and Analytics-centered Smarter Transportation Systems," University of Missouri Research Summit: Human in the Digital Age, University of Missouri at Kansas City, Kansas City, MO, September, 2018.

An, K., **Hu, X.**, and Chen, X., "Traffic Network Partitioning for Hierarchical Macroscopic Fundamental Diagram Application Based on Fusion of GPS Probe and Loop Detector Data," The 7th International Symposium on Dynamic Traffic Assignment: Smart Transportation, Hong Kong, China, 2018.

Hu, X., Zhu, X., Ma, Y.L., and Chiu, Y.C., "Advancing Usage Based Insurance – A Contextual Driving Risk Modeling and Analysis Approach," The 18th COTA International Conference of Transportation Professionals, Beijing, China, 2018.

Zhu, X., **Hu, X.**, and Chiu, Y.C., "Will Information and Incentive Affect Traveler's Day-to-day Departure Time Decisions?" An Empirical Study of the Decision-Making Evolution Process, Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Yu, X., Gao, S., **Hu, X.**, Park, H., "Multi-cycle Optimal Taxi Routing with E-hailing," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Li, Z., Kluger, R., **Hu, X.**, Wu, Y.J., and Zhu, X., "Reconstructing Vehicle Trajectories to Support Travel Time Estimation," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Libre, N.A.

Libre, N.A., "Open Educational Resources for Student Success," University of Missouri at St. Louis, Spring Forum, Professional Development for Faculty, St. Louis, MO, February, 2018.

Libre, N.A., "Activating Student Learning and Success with Instructor-built Resources," University of Missouri-St. Louis, Focus on Teaching and Technology Conference, St. Louis, MO, September, 2018.

Liu, J.

Liu, J., "Recycling in Alaska's Transportation Infrastructure," Transportation Research Board ADC60 2018 Summer Workshop, Spokane, WA, July, 2018.

Liu, J., "Characterizing the Permanent Deformation Behavior of Alaskan Granular Base Course Materials," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Liu, J., "Evaluation of Precut Technique to Control Thermal Cracking in Alaskan Asphalt Concrete Pavements," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018.

Ma, H.

Ma, H., "Studies on Advanced Materials for Sustainable Infrastructure," School of Materials Science Engineering, Southeast University, Nanjing, China, June, 2018.

Ma, H., "From Materials to Structures: Characterization, Modeling, Monitoring, and Rehabilitation," School of Civil and Transportation Engineering, Hohai University, Nanjing, China, June, 2018.

Ma, H., "Studies on Advanced Materials for Sustainable Infrastructure," Institute of Applied Physics and Materials Engineering, University of Macau, Macau, China, June, 2018.

Ma, H., "Advances in Novel Binding Mechanisms and Binder Materials," School of Civil Engineering, Qingdao University of Technology, Qingdao, China, May, 2018.

Ma, H., "Frontiers in Durability Study of Concrete," College of Civil Engineering, Shenzhen University, Shenzhen, China, January, 2018.

Myers, J.J.

Myers, J.J., "The Bond Behavior of SRP-the-concrete System in Field Environment," 9th International Conference on Fibre-reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, July, 2018, (co-presenter).

Myers, J.J., "Out-of-plane Behavior of RM Walls Strengthened with FRCM Composite or NSM with Cementitious Adhesive," 9th International Conference on Fibre-reinforced Polymer (FRP) Composites in Civil Engineering (CICE 2018), Paris, France, July, 2018, (co-presenter).

Myers, J.J., "Strength Evaluation of Prestressed Concrete Bridges by Load Testing," 9th International Conference on Bridge Maintenance, Safety, and Management (IABMAS 2018), Melbourne, Australia, July, 2018, (co-presenter).

Myers, J.J., "In-service Stress and Strain Behavior of Missouri Bridge A7957," 9th International Conference on Bridge Maintenance, Safety, and Management (IABMAS 2018), Melbourne, Australia, July, 2018, (co-presenter).

Myers, J.J., "Effect of Long-term Environmental Exposure on EB FRP or FRCM Reinforced Masonry System," 10th International Masonry Conference, Milan, Italy, July, 2018.

Oerther, D.B.

Oerther, D.B., "Science, Technology, Engineering, Art, and Math (STEAM) Diplomacy: Preliminary Results from an Initial Pilot Course," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018, <https://peer.asee.org/30952>.

Oerther, D.B., "Leveraging the NAM's 'Getting Nurses on Boards Coalition' to Promote NAE's 'Changing the Conversation' Campaign," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018, <https://peer.asee.org/30771>.

Oerther, D.B., "Introduction to Public Health for Environmental Engineers: Results from a Three-year Pilot," ASEE Annual Conference and Exposition, Salt Lake City, UT, June, 2018, <https://peer.asee.org/30720>.

Olds, D., and **Oerther, D.B.**, "Increasing Public Awareness in Regards to Antimicrobial Resistance," Undergraduate Research Conference, Missouri University of Science and Technology, Rolla, MO, April, 2018, <http://scholarsmine.mst.edu/ugrc/2018/full-schedule/26/>.

Schonberg, W.P.

Schonberg, W.P., "Can the Rupture of a Composite Overwrapped Pressure Vessel (COPV) After an MMOD Impact Be Predicted Using a Simple Equation?" 2018 CODER Workshop, University of Maryland, College Park, MD, November, 2018.

Schonberg, W.P., "FE Exam Review: Ethics, Professionalism, and Licensure," Civil, Architectural, and Environmental Engineering Department, Missouri University of Science and Technology, Rolla, MO, April, 2018.

Schonberg, W.P., "Engineering Ethics and Professionalism," Chemical Engineering Department Seminar Series, Missouri University of Science and Technology, Rolla, MO, February, 2018.

Tewari, S.

Elkins, B., and **Tewari, S.**, "Investigating Efficiency of a Do-it-yourself Biosand Filter for Removal of Disinfection Byproducts from Water," 92nd Annual Meeting of Louisiana Academy of Science, Louisiana State University, Alexandria, LA, March, 2018.

Tummala, C.M., and **Tewari, S.**, "Developing Laboratory-based Experimental Setups to Simulate Electro-kinetic Fence for Salt Water Intrusion Prevention in Coastal Areas," 92nd Annual Meeting of Louisiana Academy of Science, Louisiana State University, Alexandria, LA, March, 2018.

Ahmed, M.A., and **Tewari, S.**, "Effect of Acid Treatment and Metal Coating on the Performance of Carbon Aerogel/Fiber Paper Electrodes in Capacitive Deionization," 92nd Annual Meeting of Louisiana Academy of Science, Louisiana State University, Alexandria, LA, March, 2018.

Manning, F., and **Tewari, S.**, "Assessing The Relative Sea-level Change and Its Impact on Coastal Louisiana's Levee Infrastructure Using Geographical Information Systems," 92nd Annual Meeting of Louisiana Academy of Science, Louisiana State University, Alexandria, LA, March, 2018.

Tummala, C.M., and **Tewari, S.**, "Application of Electro-kinetic Barriers against Saltwater Intrusion," 2018 State of the Coast Conference, New Orleans, LA, May/June, 2018.

Tummala, C.M., and **Tewari, S.**, "Effects of Variability of Electrode Materials and Configurations on Performance of Electro-kinetic Barriers against Sea-water Intrusion," World Environmental & Water Resources Congress, Minneapolis, MN, June, 2018.



CONFERENCE PRESENTATIONS (continued)

Tewari, S., Ahmed, M.A., Tummala, C.M., and Elkins, B., "Removal of Disinfection By-products from Water Using a Hybrid Bio-filter Made of Sand and Low-cost Activated Carbon Derived from Coconut Shells," World Environmental & Water Resources Congress, Minneapolis, MN, June, 2018.

Wang, J.

Wang, J., Liu, X., Gheni, A., and ElGawady, M.A., "Reduced Zinc Leaching From Scrap Tire During Pavement Application," 256th ACS National Meeting & Exposition, Boston, MA, August, 2018, (oral presentation).

Wang, J., "Why Should We Promote Low DO Aeration?" 256th ACS National Meeting & Exposition, Boston, MA, August, 2018, (oral presentation).

Gheni, A., Liu, X., ElGawady, M.A., **Wang, J.**, and Shi, H., "Leaching Assessment of Eco-friendly Chip Seal Pavement," Transportation Research Board 97th Annual Meeting, Washington, D.C., January, 2018, (oral presentation).

Wu, C.

Wu C., and Guo C., "Static and Dynamic Mechanical Behavior of Suspended Graphene/Silver Nanowire/Graphene Composite," ASME-IMECE Conference, Pittsburgh, PA, November, 2018.

Wu C., and Li Y., "Characterization of Adhesion of Graphene/Silver Nano Wire Composite," ASME-IMECE Conference, Pittsburgh, PA, November, 2018.

Wu C., and Li Y., "Characterization of Adhesion of Monolayer MXenes," ASME-IMECE Conference, Pittsburgh, PA, November, 2018.

Zhang, X.

Zhang, X., "Use of Mirafi Nylon Wicking Fabric to Prevent Frost Boils in Alaskan Pavements," Transportation Research Board Workshop on Best Practices for Pavement Design Using Geosynthetics, Washington, D.C., January, 2018.

Zhang, X., "Limitations of Suction-controlled Triaxial Tests for Unsaturated Soil Characterization," IACIP Annual Meeting, Tianjin, China, January, 2018.

Zhang, X., "Use of Wicking Fabric to Prevent Frost Heave in Alaskan Pavements," Transportation Research Board Workshop on Best Practices for Pavement Design Using Geosynthetics, Transportation Research Board 97th Annual Meeting, January, 2018.

Zhang, X., "Use of Wicking Fabric to Dehydrate Road Pavements for Better Performance," Presented to the AFS 60 TRB Subsurface Drainage Committee, Transportation Research Board 97th Annual Meeting, January, 2018.

Zhang, X., "Rapid Characterization of Unsaturated Soils," Presented to the AFP60 Engineering Behavior of Unsaturated Geomaterials Committee, Transportation Research Board 97th Annual Meeting, January, 2018.

Zhang, X., "Rapid Characterization of Unsaturated Soils," Presented to the TRB AFS20 Committee on Soil and Rock Instrumentation, Transportation Research Board 97th Annual Meeting, January, 2018.

Zhang, X., "Numerical Simulation of Seasonal Variations of Base-course Resilient Modulus on Pavement Structure," Presented to the AFP60 Engineering Behavior of Unsaturated Geomaterials Committee, Transportation Research Board 97th Annual Meeting, January, 2018, (poster).



Jianmin Wang, pictured left, and C.P. Huang

Dr. Jianmin Wang gave the keynote address at the 256th American Chemical Society (ACS) National Meeting and Exposition held in Boston in August. He also gave two other separate talks regarding energy saving strategy for wastewater treatment and beneficial use of scrap tire for road construction. He served as a session chair organized by his former Ph.D. advisor, Dr. C.P. Huang from the University of Delaware.



CONTRACTS & GRANTS

Abdelrahman, M.

Abdelrahman, M. (PI), "Understanding and Improving Heterogeneous, Modern Recycled Asphalt Mixes," Missouri Department of Transportation, March 2018 to April 2020; \$236,483.

Abdelrahman, M. (PI), Liu, J. (Co-PI), and Zhang, X. (Co-PI), "Preparing Interdisciplinary Professionals for Rebuilding/Engineering Resilient Infrastructure of the Nation," U.S. Department of Education, October 2018 to September 2019; \$199,000.

Burken, J.G.

Burken, J.G. (PI), and Yin, Zhaozheng (Co-PI), "The Missouri Transect: Climate, Plants and Communities," NSF Office of Experimental Programs, August 2018 to July 2019; \$147,713.

Burken, J.G. (PI), Liu, W. (Co-PI), and Shi, H. (Co-PI), "RDX Phytoforensic Sampling in Tree Tissues," ENSAFE INC, June 2017 to May 2018; \$36,000.

Burken, J.G. (PI), Fitch, M. (Co-PI), Gillis III, W. (Co-PI), and Mendoza, C. (Co-PI), "U.S. Forest Service - Missouri S&T Student Interns," U.S. Forest Service, May 2018 to May 2022; \$41,000.

Burken, J.G. (PI), "Collaborative Data Assessment & Phytoforensic Analysis for Organic Leachate Pollutants," U.S. Forest Service, September 2018 to July 2021; \$240,000.

Burken, J.G. (PI), "International Phytotechnologies Scholars Program, Preparing Next Generation Global Leaders in our Profession 2018," NIH National Institute of Environmental HEALTH, July 2018 to June 2019; \$15,000.

Burken, J.G. (PI), and Liu, W. (Co-PI), "Tree Core & Solid Polymer Samplers (SPS) Analysis," O'Brien & Gere Inc., October 2017 to October 2018; \$20,925.

Burken, J.G. (PI), "Phytoforensic Analysis for Hydrocarbon Pollutants (Site Assessment for Alice Street)," AECOM Consultants Inc., May 2018 to August 2019; \$11,500.

Chen, G.

Chen, G. (PI), "Chemically Bonded Porcelain Enamel Coated Pipe for Corrosion Protection and Flow Efficiency," U.S. Department of Transportation, September 2015 to September 2018; \$2,226.

Chen, G. (PI), ElGawady, M.A. (Co-PI), Ma, H. (Co-PI), Myers, J.J. (Co-PI), Sneed, L.H. (Co-PI), Zoughi, R. (Co-PI), Long, S.K. (Co-PI), Qin, R. (Co-PI), and Yin, Z. (Co-PI), "Inspecting and Preserving Infrastructure through Robotic Exploration," U.S. Department of Transportation, November 2016 to September 2022; \$1,416,899.

Chen, G. (PI), "Magnet-assisted Fiber Optic Sensing for Internal and External Corrosion-induced Mass Losses of Metal Pipelines under Operation Conditions," U.S. Department of Transportation, September 2018 to September 2021; \$299,988.

Chen, G. (PI), "Unmanned Aerial System Tech Brief Development and Every Day Counts Round 5 Support," U.S. Department of Transportation, June 2018 to May 2019; \$21,577.

El-adaway, I.

Qin, R. (PI), **El-adaway, I.** (Co-PI), Canfield, C.I. (Co-PI), Dagli, C. H., (Co-PI), Long, S.K. (Co-PI), and Sun, Z. (Co-PI), "Interdisciplinary Fellowship Program in Engineering Management and Systems Engineering," U.S. Department of Education, October 2018 to September 2019; \$199,000.

ElGawady, M.A.

ElGawady, M.A. (PI), "Evaluating and Relaxing the Limits on Flexural Reinforcement Ratio of Masonry Shear Walls," Missouri Department of Natural Resources, January 2018 to January 2019; \$149,532.

ElGawady, M.A. (PI), "Durability and Traffic Conditions Assessment of Scrap Tires as an Aggregate in Chip Seal Pavement," Mid-Missouri Solid Waste Management District, February 2018 to December 2018; \$10,000.

ElGawady, M.A. (PI), "Retrofitting of Metal Roofs Using Single-ply," GAF Building Materials Corp., May 2018 to May 2019; \$97,526.

Feys, D.

Feys, D. (PI), and Khayat, K. (Co-PI), "Testing Concrete for Deep Foundations," Deep Foundation Institute, August 2016 to June 2018; \$7,000.

Fitch, M.

Niyogi, D.K. (PI), and **Fitch, M.** (Co-PI), "Nonpoint Source Pollution Mitigation in an Urban Watershed," Department of Interior, June 2018 to June 2019; \$21,796.

Smith, J. (PI), **Fitch, M.** (Co-PI), Dunn Norman, S. (Co-PI), Forciniti, D. (Co-PI), Ludlow, D.K. (Co-PI), Erickson, K.T. (Co-PI), Raper, S.A. (Co-PI), Drallmeier, J.A. (Co-PI), and Hofer, J. (Co-PI), "Collaboration in the Development of Programs in the New GUST College of Engineering," Gulf University for Science and Technology, December 2018 to November 2019; \$308,078.



CONTRACTS AND GRANTS (continued)

Hu, X.

Hu, X. (PI), "Missouri Department of Transportation Leader-follower TMA System, Non-Federal," Micro Systems, Inc., April 2018 to March 2020; \$34,320.

Hu, X. (PI), "Missouri Department of Transportation Leader-follower TMA System-Federal," Micro Systems, Inc., April 2018 to March 2020; \$17,680.

Khayat, K.H.

Khayat, K.H. (PI), "RE-CAST/Performance-based Specifications of Fiber-reinforced Concrete with Adapted Rheology to Enhance Performance and Reduce Steel-reinforcement in Structural Members," U.S. Department of Transportation, February 2018 to September 2019; \$89,999.

Khayat, K.H. (PI), "Compacted Concrete Pavement-SE District," Missouri Department of Transportation, September 2018 to December 2021; \$125,000.

Khayat, K.H. (PI), "Performance of Synthetic Fiber-reinforced Concrete with Adapted Rheology," GCP Applied Tech, September 2018 to August 2020; \$75,000.

Khayat, K.H. (PI), "RE-CAST/Compacted Concrete Pavement," U.S. Department of Transportation October 2018 to September 2019; \$23,569.

Khayat, K.H. (PI), "RE-CAST/Performance of Synthetic Fiber-reinforced Concrete with Adapted Rheology," U.S. Department of Transportation, September 2018 to September 2019; \$40,000.

LaBoube, R.

LaBoube, R. (PI), "Wei-Wen Yu Center for Cold-formed Steel Structures," Metal Building Manufacturers Association, January 2018 to December 2018; \$5,000.

LaBoube, R. (PI), "SDI Sponsorship of CCFSS," Steel Deck Institute, January 2018 to December 2018; \$5,000.

LaBoube, R. (PI), "RMI Sponsorship of CCFSS," Rack Manufacturers Institute, Inc., January 2018 to December 2018; \$5,000.

LaBoube, R. (PI), "AISI Sponsorship of CCFSS," American Iron And Steel Institute, January 2018 to December 2018; \$52,500.

LaBoube, R. (PI), "Wei-Wen Yu Center for Cold-Formed Steel Structures," Steel Framing Industry Association, January 2018 to December 2018; \$5,000.

LaBoube, R. (PI), "CFSEI Sponsorship of CCFSS" Cold-Formed Steel Engineers Institute, January 2018 to December 2018; \$5,000.

Myers, J.J.

Myers, J.J. (PI), Chen, G. (CoPI), ElGawady, M.A. (Co-PI), Sneed, L.H. (Co-PI), and Yan, G. (Co-PI), "Graduate Assistance in Areas of National Need (GAANN)," U.S. Department of Education, September 2018 to August 2019; \$248,750.

Pickerill, H.A.

Pickerill, H.A. (PI), "Local Assistance Program at the Missouri University of Science and Technology (S&T)," Missouri Department of Transportation, January 2018 to December 2018; \$300,000.

Sneed, L.H.

Sneed, L.H. (PI), "Investigation of the Performance of Dowels in Concrete Slabs," Sika Corporation, November 2018 to June 2019; \$24,000.

Sneed, L.H. (PI), Donnell K. (Co-PI), Hilgedick, S. (Co-PI), Ghasr, M.T. (Co-PI), and Grubbs II, G. (Co-PI), "A Multi-physics-based Approach to Active Microwave Thermography," NSF Division of Electrical Communications Systems, July 2016 to June 2019; \$8,000.

Zhang, X.

Zhang, X. (PI), "A Photogrammetric Method to Measure 3D Full Field Displacement of Geosynthetics during the Tensile Test (Xiaolong Xiao)," Geosynthetic Institute, July 2018 to July 2019; \$5,000.

Zhang, X. (PI), "Use of H2Ri to Mitigate Pumping in Concrete Pavement Shoulders," Missouri Department of Transportation, September 2018 to January 2020; \$37,403.

Zhang, X. (PI), "CESTICC Projects: #1508, #1509, #1619, #1616, #1617, #1618; Year 2 funds," University of Arkansas, May 2018 to August 2019; \$44,519.

HONORS & AWARDS

Baur, S.W., Recipient, Experiential Learning Award, Missouri S&T, 2018.

Burken, J.G., American Academy of Environmental Engineers and Scientists (AAEES) Science Award, 2018. (1 annually)

Burken, J.G., Presidential Engagement Fellow – President of the University of Missouri System, 2018.

El-adaway, I., 2019 Top Young Professional (i.e. Top 20 under 40), Engineering News Record Midwest, United States, 2018.

ElGawady, M.A., Faculty Research Award, Missouri S&T, 2018.

Feys, D., ACI Young Member Award for Professional Achievement, American Concrete Institute, 2018.

Feys, D., Joseph and Jeanne Senne Award for Scholarly Achievement, CArEE, Missouri S&T, 2018.

Feys, D., Outstanding Teaching Award, Missouri S&T, 2018.

Fitch, M., Faculty Service Award, Missouri S&T, 2018.

Hu, X., Excellent Paper Award, World Transport Convention, June 18-21, 2018. Paper presented, "Advancing Usage Based Insurance: A Contextual Driving Risk Modeling and Analysis Approach," 74 out of 1829 (4%), 2018.

Khayat, K., Wason Medal for the Most Meritorious Paper, American Concrete Institute, 2018.

Khayat, K., Chi Epsilon Chapter Honor Member, Missouri S&T, 2018.

Khayat, K., Vice Chair, Gordon Research Conference, Advanced Materials for Sustainable Infrastructure Development, August 5-10, Hong Kong, China, 2018.

Khayat, K., Honorary Chair, International RILEM Workshop on Rheological Measurements of Cement-Based Materials, IRWRMC 2018, Arras, France, May, 2018.

Khayat, K., Elected Member, ACI 90 Technical Activities Committee, 2018.

Libre, N.A., Faculty Achievement Award, Center for Advancing Faculty Excellence (CAFE), Missouri S&T, Rolla, MO, December, 2018.

Libre, N.A., Teaching and Technology Award, Focus on Teaching and Technology Conference, St. Louis, MO, September, 2018.

Libre, N.A., President Award for Innovative Teaching, University of Missouri System, Columbia, MO, June, 2018.

Libre, N.A., CERTI Service Award, Center for Educational Research and Teaching Innovation (CERTI), Missouri S&T, Rolla, MO, April, 2018.

Ma, H., Highly Cited Paper Recognition, "Realistic pore structure of Portland cement paste: experimental study and numerical simulation," *Computers and Concrete*, Vol. 11, No. 4, pp. 317-336, 2013, Web of Science, 2018.

Ma, H., Outstanding Reviewer, *Cement & Concrete Composites*, 2018.

Myers, J.J., International Institute for FRP in Construction (IIFC) Fellow – 35th Society Member Fellow Elected by IIFC, notified July, 2018.

 (continued on page 31)



Pictured from left to right: Dimitri Feys, John Myers, Mohamed ElGawady, Mark Fitch and Nicolas Libre.

GRADUATE STUDENTS

Master of Science (with thesis)

Ansari, M.G., "Numerical Modeling of Capillary-driven Flow in Open Microchannels: An Implication of Optimized Wicking Fabric Design," Advisor: **W. Deng**

Cinar, Y.A., "The Importance of Chemical Grouting Materials for Optimum Mechanical Performance with Different Soil Conditions," Advisor: N. Maerz, GGPE, Co-Advisor: **J.J. Myers**

Colbert, N., "Local Buckling of Axially Loaded Steel Tubes Externally Constrained Using Concrete and FRP," Advisor: **M.A. ElGawady**

Doss, A., "Bioaccessibility of Lead from Contaminated Soil Using Phosphate Treatment-physiologically Based Extraction Test and In Vitro Gastrointestinal Method Test," Advisor: **M. Fitch**

Eteifa, S., "Social Network Analysis for Determining Root Causes of Construction Fatalities," Advisor: **I. El-adaway**

Janke, M., "Field Implementation of Cement-based Composite Strengthening Technologies," Advisor: **J.J. Myers**

Jemison, S., "Compressive Behavior of Masonry Columns Confined with Steel Reinforced Grout (SRG) Composite," Advisor: **L.H. Sneed**

Moore, C., "A Study on End-anchorage and Bond Behavior of Steel Fiber Reinforced Cementitious Matrix Composites Externally Bonded to a Concrete Substrate," Advisor: **L.H. Sneed**

Morgan, A., "Nonlinear Finite Element Analysis of Concrete Columns Subjected to Complex Loading," Advisor: **L.H. Sneed**

Nain, M., "Cyclic Axial Compression Behavior of Concrete-filled Hybrid Large Rupture Strain FRP Tubes," Advisor: **M.A. ElGawady**

Ojha, S., "Cullulose and Sulfate Degradation in a Biochemical Reactor during Treatment of Mine Drainage," Advisor: **M. Fitch**

Sargon, S.P., "Optimization of Thermal Curing of Class C Fly Ash-based Geopolymer Mortars," Advisor: **M.A. ElGawady**

Yarbrough, T., "The Thermal Effects of Daylighting in an Energy Efficient Home," Advisor: **S. Baur**

Doctor of Philosophy

Abotaleb, I., "Construction Dispute Mitigation Using Quantitative and Qualitative Analytics," Advisor: **I. El-adaway**

Alabdulhady, M., "Torsional Behavior of RC Beams Strengthened with PBO-FRCM Composite," Advisor: **L.H. Sneed**

Alghazali, H., "Behavior and Temporal-based Effects of Sustainable Self-consolidating Concrete in Bridge Structures," Advisor: **J.J. Myers**

Al-Jaberi, Z., "Strengthening of Reinforced Masonry Walls Subjected to Out-of-plane Pseudo-static Cyclic Load Using Advanced Composite," Advisor: **J.J. Myers**

Asghari, A., "Sensitivity of Rheological Properties of Cement Paste With SCC Consistency," Advisor: **D. Feys**

Cao, J., "Bio-inspired Geomaterial Improvement and Development of Innovative Characterization Methods," Advisor: **W. Deng**, Co-Advisor: **B. Bate**

Edgmond, N., "Examination of Shear Friction Design Provisions," Advisor: **L.H. Sneed**

Gheni, A., "Feasibility and Assessment of Using Recycled Rubber for Infrastructure Applications," Advisor: **M.A. ElGawady**

Gliha, B., "Shear Performance and Behavior of Long Carbon Fiber Reinforced Concrete," Advisor: **K.H. Khayat**

Hernandez, E., "Service Response and Evaluation of Prestressed Concrete Bridges Through Load Testing," Advisor: **J.J. Myers**

Li, Z., "Critical Buckling and Post-buckling Behavior of Thin-walled Liners Confined in Underground Pipelines in Saturated Soils," Advisor: **G. Chen**

Lusher, S.M., "Guayule Plant Extracts as Binder Modifiers in Flexible (Asphalt) Pavement Mixtures," Advisor: **D. Richardson**

Qu, H., "Adaptive Data Analysis for Damage Detection in Civil Infrastructure," Advisor: **G. Chen**

Wang, S., "Long-term Behavior of Fiber Reinforced Polymer (FRP) Confined Concrete Cylinders Subjected to Severe Weather and Seawater Solution Conditions," Advisor: **M.A. ElGawady**

Wu, Z., "Multi-scale Investigation of Microstructure, Fiber-matrix Bond, and Mechanical Properties of Ultra-high Performance Concrete," Advisor: **K.H. Khayat**

HONORS & AWARDS (continued)

Myers, J.J., The Masonry Society TAC Service Recognition – Award from TMS, recognized October, 2018.

Myers, J.J., Outstanding Elsevier Reviewer Award – Award from Elsevier's *Construction and Building Materials Journal*, recognized April, 2018.

Myers, J.J., Missouri S&T Faculty External Recognition Award – University Wide, Missouri S&T, recognized May, 2018.

Myers, J.J., Missouri S&T Faculty Research Award – University Wide, Missouri S&T, recognized December, 2018.

Oerther, D.B., Faculty Service Learning Award, Missouri S&T, 2018.

Oerther, D.B., Stanley K. Kappe Award, American Academy of Environmental Engineers and Scientists, 2018.

Oerther, D.B., Elected Board Certified Environmental Scientist (via eminence), American Academy of Environmental Engineers and Scientists, 2018.

Oerther, D.B., Dr. John L. Leal Award, American Water Works Association, 2018.

Oerther, D.B., Elected Lifetime Honorary Fellow of the Academy of Nursing Education, National League for Nursing, 2018.

Oerther, D.B., Elected Fellow, Society of Environmental Engineers, 2018.

Oerther, D.B., Commendation for Outstanding Environmental Health Professional, Annual Excellence Awards, Chartered Institute of Environmental Health, 2018.

Oerther, D.B., Winner of Best Innovative Environmental Health Solution, Annual Excellence Awards, Chartered Institute of Environmental Health, 2018.

Oerther, D.B., Elected Fellow, Chartered Institute of Environmental Health, 2018.

Oerther, D.B., Appointed to the Board of Directors, Welfare Fund, Chartered Institute of Environmental Health, 2018.

Schonberg W.P., Fulbright Distinguished Chair in Advanced Science and Technology, U.S. State Department, 2018.

Showalter, W.E., Deans Teaching Scholar, 2018-2020.

Showalter, W.E., Kiewit Faculty Scholar, Lenexa, KS, and Alamos Power Plant, Seal Beach, CA, 2018.

Showalter, W.E., Building a Stronger Curriculum with Kiewit – selected to attend faculty workshop in Omaha, NB, June, 2018.

Showalter, W.E., Joseph Senne Academy of Civil Engineers Faculty Teaching and Service Achievement Award, April, 2018.

Showalter, W.E., Missouri S&T, Chi Epsilon Chapter Honor Member Inductee, Fall, 2018.

Sneed, L.H., University of Bologna Institute of Advanced Studies Visiting Fellowship, 2018.

Sneed, L.H., Purdue University Civil Engineering Student Advisory Council (CEGSAC) Emerging Leaders Lecture Awardee, 2018.

Tewari, S., Board of Directors Committee on P12 Engineering Education, representing Environmental Engineering Division of American Society of Engineering Education, 2018.

Tewari, S., National Committee on Water Desalination and Reuse, American Society of Civil Engineers, 2018.

Tewari, S., National Committee on Student Members, American Society of Civil Engineers, 2018-2021.

Tewari, S., National Committee on Water Pollution (formerly Wastewater Engineering Technical Committee), American Society of Civil Engineers, 2018.

Tewari, S., Student Services Committee, Association of Environmental Engineering and Science Professors, 2018.



Eric Showalter, Academy Teaching and Service Award



Daniel Oerther, S&T Faculty Service Learning Award

INVITED TALKS (continued)

Yan, G., "Simulation of Tornadoic Wind Fields and Wind Effects Induced by Tornadoes," Tongji University, Shanghai, China, June, 2018.

Yan, G., "Help Insurance Companies Properly Price Premium by Predicting Tornado Induced Damage," Berkshire Hathaway Specialty Insurance, San Francisco, CA, August, 2018.

Yan, G., "Tornadoic Wind Effects on Large-scale Dome Structures," Southeast University, Nanjing, China, July, 2018.

Yan, G., "Towards Tornado-resistant Design," Shanghai Municipal Building and Architecture Engineering Company, Shanghai, China, July, 2018.

Yan, G., "CFD Simulation of Tornadoic Wind Fields," Suzhou University of Science and Technology, Suzhou, China, July, 2018.

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