2017 Scholarly Productivity Report

Civil, Architectural and Environmental Engineering

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In this edition of the Department of Civil, Architectural and Environmental Engineering Scholarly Productivity Report, we are excited to share our 2017 activities. The year was a step forward in working toward completing plans that were introduced in our Vision 2020 Plan in 2011. We enjoyed increased productivity in most aspects of our scholarly work and are thrilled to share that progress with you herein.

Most of all, we were excited to welcome three new team members (listed below) to the department, and we look for them to lead us into new research and educational areas.

- Dr. Magdy Abdelrahman joined us as the Missouri Asphalt Pavement Association (MAPA) Professor. Dr. Abdelrahman had been a professor of civil engineering at North Dakota State University, and he previously received a National Science Foundation (NSF) CAREER Award for research and new courses in infrastructure sustainability.

- Dr. Jenny Liu also joined Missouri S&T as part of the campuswide signature area hire in Advanced Materials for Sustainable Infrastructure. Dr. Liu joins us from the University of Alaska Fairbanks, where she was a professor in civil and environmental engineering. She also served as the director of the USDOT University Transportation Center (UTC), Center for Environmentally Sustainable Transportation in Cold Climates (CESTiCC).

- Dr. XianBiao “XB” Hu was also welcomed as a new assistant professor and as part of the campuswide signature area hire in Smart Living. He earned a Ph.D. at the University of Arizona, where he served as affiliate professor, and he also served as research and development director of Metropia Inc., prior to joining our team at S&T. Dr. Hu’s research interests include the design and development of smart transportation systems, driving safety and insurance telematics, and energy-saving oriented travel behavior.

Along with these new members of the team, we celebrated a strong year of production, with a listing of over 130 peer-reviewed journal articles for our faculty and students (page 7), as well as many notable international keynote talks and presentations (page 19). The CaRrE faculty also marked a solid year of new research projects, notably the new USDOT University Transportation Center, Inspecting and Preserving Infrastructure through Robotic Exploration “INSPIRE” that will run for five years and include new automated infrastructure nondestructive testing methods (page 27). Many national and international awards were also bestowed upon our faculty, ranging from notable research breakthroughs to recognition of career for accomplishments in teaching, service and research (page 29).

The team of faculty, staff and students in the CaRrE department celebrated an excellent year. In particular, we moved forward on the new building expansion of the Advanced Construction and Materials Laboratory (ACML), beginning the design process with the ground breaking to be scheduled for fall 2018 (back cover). The construction project of $6.5 million links many of the faculty hires and ongoing research efforts highlighted in this report. With all the experience and talents of our new faculty, the increased facilities capabilities in place or pending, and the current funding of projects commencing in 2018, we look to continue the current direction for advancing our research and educational programs. Our talented team and our research and educational facilities will undoubtedly create greater opportunities for our graduates to go out and “change the world” in their career as Missouri S&T alumni.

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

Sincerely,
Joel G. Burken
Chair and Curators’ Distinguished Professor
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 Associate 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.I.AIA
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

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Daniel Abbott
Lecturer, Mechanics
Education:
M.S. Mechanical Engineering, Missouri S&T
Courses Taught:

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. Abbott 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, Multihazards 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

Mohamed ElGawady
Ph.D.
Associate 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
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Education/Professional Experience</th>
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<tr>
<td>John Myers</td>
<td>Ph.D., P.E., F.ACI, FASCE, F.TMS, Associate Dean, College of Engineering and Computing, Director, High-Bay Laboratory Education</td>
<td>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</td>
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<tr>
<td>Kamal Khayat</td>
<td>Ph.D., P.E., F.ACI, F.RILEM, Vernon and Maralee Jones Professor, Materials Engineering Director, Center for Infrastructure Engineering Studies</td>
<td>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</td>
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<td>Daniel Oerther</td>
<td>Ph.D., P.E., BCEE, CEng, CEHS, D.AAS, M.CIIEH, 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</td>
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<tr>
<td>Nicolas Ali Libre</td>
<td>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</td>
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<tr>
<td>Jenny Liu</td>
<td>Ph.D., P.E., Associate Professor, Materials and Pavement Engineering Education: Ph.D. Civil Engineering, Texas A&amp;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)</td>
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<tr>
<td>Lesley Sneed</td>
<td>Ph.D., P.E., 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</td>
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MR. MSM-UMR-S&T RETIRES

It was the end of an era when Jerry Bayless, a faculty member at Missouri S&T (and MSM, and UMR) for more than half a century, retired in February 2017. The longtime instructor in civil engineering was celebrated during Homecoming. “There’s nobody who has made such an impact on our students in our almost 150 years of civil engineering education in Rolla,” says Dr. Joel Burken, Curators’ Distinguished Professor and chair of civil, architectural and environmental engineering. “He has influenced many, many students, helping those who are struggling to stay in school and see it through. That’s day to day, not just a special occasion. That’s who he is.”

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

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
Research Interests:

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
Abdelrahman, M.


Baur, S.W.


Burken, J.G.


Chen, G.


**ElGawady, M.A.**


**Feys, D.**


**Hu, X.**


**Khayat, K.H.**


Myers, J.J.


Oerther, D.B.


Schonberg, W.P.


Sneed, L.H.


Wang, J.


Wu, C.


Yan, G.R.


Zhang, X.


Abdelrahman, M.


ElGawady, M.A.


Liu, J.


Myers, J.J.


Oerther, D.B., “Using Diplomacy Lab to Teach Interdisciplinary Students about Global Public Health,” Sigma Theta Tau, the International Honor Society of Nursing (STTI), Indianapolis, IN, October, 2017, http://hdl.handle.net/10755/622751.

Schonberg, W.P.


Sneed, L.H.


Wu, C.


Zhang, X.


**ElGawady, M.A.**


**Feys, D.**


**Hu, X.**


**Liu, J.**


**Mendoza, C.**


**Myers, J.J.**


**Sneed, L.H.**


**Yan, G.R.**

Yan, G.R., *Damage and Instability Detection of Civil Large-scale Space Structures under Operational and Multi-hazard Environments based on Change in Macro-geometrical Patterns/Shapes*. Annual report, NSF project 1455709, April, 2017.
Burken J.G


Chen, G.


ElGawady, M.A.


Khayat, K.H.


Liu, J.


Myers, J.J.

Myers, J.J., “Diagnostic Test for Load Rating of a Prestressed SCC Bridge,” American Concrete Institute (ACI) 2017 Fall Conference, Anaheim, CA, October, 2017, (Co-presenter, ACI Committee 239 as Special Invited Presentation).


Oerther, D.B.


Schonberg, W.P.


Sneed, L.H.


Wu, C.


Zhang, X.

Zhang, X., “Use of Wicking Fabric to Dehydrate Road Pavements under Unsatuated Conditions,” Presented to the ACSE GI St. Louis Chapter Case Histories Seminar and Student Projects, St. Louis, MO, April, 2017.


Burken J.G.


Chen, G.


Chen, G., "Integrated Smart Structure Technologies for Automated Inspection and Preservation of Bridges on Mobile Platforms," Presented at the 13th International Workshop on Advanced Smart Materials and Smart Structures Technology, University of Tokyo, Japan, July, 2017.


CONFERENCE PRESENTATIONS (continued)

ElGawady, M.A.


Feys, D.


Hu, X.


Khayat, K.H.


Libre, N.A.


Libre, N.A., “Practical Tools to Accelerate Student Learning and Save Grading Time,” Center for Educational Research and Teaching Innovation (CERTI), Missouri University of Science and Technology, Rolla, MO, April, 2017.


Liu, J.


Liu, J., “Recycling in Alaska’s Transportation Infrastructure,” 2nd International Conference on Transportation Infrastructure and Materials, Qingdao, China, June 2017.


Myers, J.J.


Mendoza, C.


Myers, J.J.


Myers, J.J., “Bond Performance of Eco-friendly Self-consolidating Concrete (Concrete with 70% Cement Replacement),” American Concrete Institute (ACI) 2017 Fall Conference, Anaheim, CA, October, 2017, (Co-presenter).
Myers, J.J., “Dynamic Load Allowance of a Prestressed Concrete Bridge through Load Field Tests,” 4th International Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures (SMAR 2017), Zurich, Switzerland, September 15, 2017.

Myers, J.J., “Evaluation of Strains and Stresses of Prestressed Girders for Bridge A7957, Missouri, USA (Field Study),” 4th International Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures (SMAR 2017), Zurich, Switzerland, September, 2017.


Myers, J.J., “Bond Performance of SRP-to-Concrete Subjected to Environmental Cycling and Sustained Loading,” 5th International Conference on Durability of Fibre Reinforced Polymer (FRP) Composites for Construction & Rehabilitation of Structures (CDCC 2017), Sherbrooke, Quebec, Canada, July, 2017.


Myers, J.J., “Evaluation of Prestress Losses for Bridge A7957 Constructed with High Strength Concrete (Field Study),” Prestressed-Precast Concrete Institute (PCI) 2017 Convention and National Bridge Conference, Cleveland, OH, March, 2017, (Co-presenter).

Oerther, D.B.


Richardson, D.N.


Schonberg, W.P.

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<tr>
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<tr>
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<td>Wang, J.</td>
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<tr>
<td>Huang, C.P., Wang, J., and Park, S.W.</td>
<td>“Surface Complex Formation between Heavy Metal Ions and Sludge Particulates,” 254th ACS National Meeting, Washington, D.C., August, 2017, (Oral presentation).</td>
<td>Invited by: (a) Research Center for Eco-Environmental Sciences (June 2017); (b) Shanghai University (June 2017).</td>
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<td>Wu, C.</td>
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<td>Yan, G.R.</td>
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<td>Zhang, X.</td>
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</table>
Burken, J.G.


Burken, J.G. (PI), and Liu, W. (CoPI), “Site Assessment for Alice Street: Data Assessment and Phytoforensic Analysis for Hydrocarbon Pollutants,” University of Guelph, July 2017 to December 2017; $17,050.

Chen, G.

Chen, G. (PI), ElGawady, M.A. (CoPI), Ma, H. (CoPI), Myers, J.J. (CoPI), Sneed, L.H. (CoPI), Zoughi, R. (Co-PI), Long, S.K. (CoPI), Qin, R. (CoPI), and Yin, Z. (CoPI), “Inspecting and Preserving Infrastructure through Robotic Exploration,” Department of Transportation, November 2016 to September 2022, Year 2; $1,416,899 (Parent grant, sub-awards listed).

Chen, G. (PI), “INSPIRE: UAV-enabled Measurements for Spatial Magnetic Field of Smart Rocks in Bridge Scour Monitoring,” Department of Transportation, March 2017 to July 2018, Year 1; $162,361 (Sub-award).


Chen, G. (PI), and Ma, H. (CoPI), “INSPIRE: Hyperspectral Image Analysis for Mechanical and Chemical Properties of Concrete and Steel Surfaces,” Department of Transportation, March 2017 to July 2018, Year 1; $82,936 (Sub-award).

Chen, G. (PI), and Ma, H. (CoPI), “INSPIRE: Hyperspectral Image Analysis for Mechanical and Chemical Properties of Concrete and Steel Surfaces,” Department of Transportation, March 2017 to July 2018, Year 2; $41,464 (Sub-award).

Chen, G. (PI), ElGawady, M.A. (CoPI), Ma, H. (CoPI), Myers, J.J. (CoPI), Sneed, L.H. (CoPI), Zoughi, R. (Co-PI), Long, S.K. (CoPI), Qin, R. (CoPI), and Yin, Z. (CoPI), “Inspecting and Preserving Infrastructure through Robotic Exploration,” Department of Transportation, November 2016 to September 2022, Year 2; $1,416,899 (Parent grant, sub-awards listed).

Chen, G. (PI), “Sensor-assisted Condition Evaluation of Steel and Prestressed Concrete Girder Bridges Subjected to Fire-Phase 1,” University of Nebraska-Lincoln, August 2017 to December 2018; $76,164.

Chen, G. (PI), “SMART Shear Keys for Multi-hazards Mitigation of Diaphragm-free Girder Bridges-Phase 1,” University of Nebraska-Lincoln, August 2017 to December 2018; $80,566.

Deng, W.


ElGawady, M.A.


ElGawady, M.A. (PI), and Schonberg, W.P. (CoPI), “Assessment and Repair of Corroded Steel H-piles,” Missouri Department of Transportation, December 2017 to July 2020; $227,498.
ElGawady, M.A. (PI), "Using Scrap Tires as an Aggregate in Infrastructure – Phase II," Missouri Department of Natural Resources, October 2017 to October 2018; $226,820.

ElGawady, M.A. (PI), "Behavior of Corroded Steel H-piles – Phase I," University of Nebraska-Lincoln, August 2017 to December 2018; $95,756 (Sub-award).

ElGawady, M.A. (PI), "Using Scrap Tires as an Aggregate in Infrastructure – Phase II," Missouri Department of Natural Resources, October 2017 to October 2018; $226,820.

ElGawady, M.A. (PI), "Behavior of Corroded Steel H-piles – Phase I," University of Nebraska-Lincoln, August 2017 to December 2018; $95,756 (Sub-award).


Feys, D. (PI), "Minimizing the Effect of Pumping on SCC Workability and Freeze-thaw Durability," American Concrete Institute, July 2017 to December 2018; $50,000.


Khayat, K.H. (PI), "MoDOT: Performance-based Specifications of Fiber-reinforced Concrete with Adapted Rheology to Enhance Performance and Reduced Steel-reinforcement in Structural Members," Missouri Department of Transportation, December 2017 to January 2019; $89,999.

LaBoube, R. (PI), "SDI Sponsorship of CCFSS," Steel Deck Institute, January 2017 to December 2017; $5,000.

LaBoube, R. (PI), "RMI Sponsorship of CCFSS," Rack Manufacturers Institute, Inc., January 2017 to December 2017; $5,000.

LaBoube, R. (PI), "AISI Sponsorship of CCFSS," American Iron and Steel Institute, January 2017 to December 2017; $52,500.

LaBoube, R. (PI), "Wei-Wen Yu Center for Cold-formed Steel Structures," Steel Framing Industry Association, January 2017 to December 2017; $5,000.

LaBoube, R. (PI), "Wei-Wen Yu Center for Cold-formed Steel Structures," Metal Construction Association, January 2017 to December 2017; $5,000.

Lusher, S.M. (PI), "Guayule Plant Extracts as Recycling Agents in Hot Mix Asphalt with High Reclaimed Binder Content: An Experimental Paving Project," Department of Agriculture, June 2017 to June 2018; $32,000.

Ma, H. (PI), and Kumar, A. (CoPI), "A Thermo-kinetic Approach to Enhance the Use of Clays in Concrete," NSF Division of Civil, Mechanical & Manufacturing Innovation, July 2017 to June 2020; $393,948.

Myers, J.J. (PI), "RE-CAST: Strengthening and Repair of Structural Concrete with a Fabric-reinforced-cementitious-matrix (FRCM): Laboratory Studies and Field Implementation," Department of Transportation, June 2014 to June 2018; $95,784.

Myers, J.J. (PI), "RE-CAST/Durability of GFRP Bar Reinforcement Extracted from In-service Concrete Structures," Department of Transportation, January 2017 to June 2018; $63,862.

Liu, J. (PI), "CESTiCC Projects: #1616, #1617, #1618," University of Alaska, May 2017 to September 2018; $410,653.
HONORS & AWARDS


**ElGawady, M.A.**, Faculty Excellence Award, Missouri University of Science and Technology, 2017.


**Gillis, W.**, Professor Appreciation Award – Chi Epsilon, 2017.


**Khayat, K.H.**, 2017 ACI Foundation Jean-Claude Roumain Innovation in Concrete Award, “for over 25 years of research, teaching, innovation, and leadership contributing to the advancement of self-consolidating concrete; and the relentless pursuit of knowledge transfer by organizing numerous conferences covering the science, performance, design, and testing standards of self-consolidating concrete” Presented at ACI Spring Concrete Convention and Exposition, March, 2017.


**Khayat, K.H.**, Appointed Member of the Inaugural Editorial Board for the *Materials Journal* of the American Concrete Institute, 2017.


**Libre, N.A.**, Faculty Teaching and Service Achievement Award, Joseph H. Senne, Jr., Academy of Civil Engineers, Rolla, MO, 2017.

**Libre, N.A.**, 1st Place Award for Active Learning Video Competition, Presented at the Teaching and Learning Technology Conference, Missouri University of Science and Technology, Rolla, MO, 2017.

**Ma, H.**, ExCEEd Fellow, American Society of Civil Engineers, June, 2017.


**Ma, H.**, Outstanding Reviewer, Cement and Concrete Research, 2017.


**Myers, J.J.**, Chi Epsilon Honor Society Chapter Honor Member – Received Chi Epsilon Civil Engineering Honor Society Beta Chapter Honor Member Recognition, April, 2017.

**Myers, J.J.**, Inaugural Joseph H. Senne, Jr. Academy of Civil Engineers Faculty Scholarly Achievement Award – Missouri S&T Academy of Civil Engineers Presented April, 2017.

**Myers, J.J.**, AEI Outstanding Educator Award – Received Society Outstanding Educator award recognition April, 2017, in Oklahoma City, OK at the AEI Conference.


**Myers, J.J.**, Appointed Vice Chair Precast-Prestressed Concrete Institute (PCI) Journal Awards Committee, Chicago, IL, 2017.


Oerther, D.B., Elected Certified Environmental Professional by Eminence, Academy of Board Certified Environmental Professionals, 2017.

Oerther, D.B., Elected Certified Environmental Health Specialist, Board of Registration of the Missouri Environmental Health Association, 2017.


Oerther, D.B., President’s Award for Cross-Cultural Engagement, University of Missouri System, 2017.


Richardson, D.N., Alumni Merit Award, Miner Alumni Association, 2017.


Sneed, L.H., 2016 Faculty Excellence Award, Missouri University of Science and Technology, 2017.

Sneed, L.H., Precast/Prestressed Concrete Institute (PCI) Daniel P. Jenny Research Fellowship, 2017-2018.

Sneed, L.H., Visiting Professor, University of Bologna, Italy, June 2017 – July 2017.

Master of Science
(with thesis)


Hill, J.T., “Cloth-air Partitioning of Oxybenzone,” Advisor: G.C. Morrison


Sukharia, R., “Vegetation Based Assessment and Monitoring Tools for Landfill Leachate Treatment and Fugitive Plumes,” Advisor: J.G. Burken

Doctor of Philosophy

Bao, Y., “Novel Applications of Pulse Pre-pump Billouin Optical Time Domain Analysis for Behavior Evaluation of Structures under Thermal and Mechanical Loading,” Advisor: G. Chen


Mullin, A.P., “Evaluation of Crack Sealing Techniques in Alaska’s Asphalt Concrete Pavements,” Advisor: J. Liu


Wang, W., “Durability Behavior of Fiber Reinforced Ploymer and Steel Reinforced Polymer for Infrastructure Applications,” Advisor: J.J. Myers

Wilson, J., “Phytoforensics: Applications in Vapor Intrusion Assessment,” Advisor: J.G. Burken
This unique laboratory will give Missouri S&T investigators a competitive edge and help build our reputation as one of the nation’s leading teaching and research universities. The cost of the expansion is $6.5 million, and we are approaching the finish line thanks to a gift of $3 million from alumnus James A. Heidman, CE’65. University of Missouri System President Mun Choi contributed $1.7 million to help push the project closer to completion. Plans are currently being developed with Christner Inc. & McClure Engineering, with bids to be sought in August 2018. The ACML’s scheduled completion is expected in fall 2019.

For information regarding the ACML expansion, contact Dr. Joel Burken by email at burken@mst.edu or Dr. Kamal Khayat at khayatk@mst.edu.