

Belinda Sue McSwain Sturm, PhD

Edward & Thelma Wohlgemuth Faculty Scholar
Civil, Environmental & Architectural Engineering

The University of Kansas

1530 W 15th St, Room 2150 Learned Hall

Lawrence, KS 66045-7609

Phone: (785) 864-1739 ; Fax: (785) 864-5379

Email: bmcswain@ku.edu; Web: <http://www.people.ku.edu/~bmcswain/>

EDUCATION

PhD Civil Engineering & Geological Sciences, School of Engineering,
University of Notre Dame, 2005

BSPH Environmental Science & Engineering, School of Public Health,
University of North Carolina-Chapel Hill, 2000

WORK EXPERIENCE

Academic

Endowed Faculty Scholar, University of Kansas, 2016 – current

Associate Professor, Civil, Environmental & Architectural Engineering,
University of Kansas, 2013 – current

Assistant Professor, Civil, Environmental & Architectural Engineering,
University of Kansas, 2006 – 2013

Postdoctoral Researcher, Civil and Environmental Engineering,
University of California, Davis, 2005 – 2006

Graduate Research Assistant, Institute for Water Quality and Waste Management,
Technical University Munich, Germany, 2002 – 2005

Graduate Teaching Assistant, Civil Engineering & Geological Sciences,
University of Notre Dame, 2000 – 2002

Visiting Scholar, La Sapienza University, Italy, 2001

Undergraduate Researcher, Clarkson University, 1999

Professional

Aerobic Granular Sludge Steering Committee, Aqua-Aerobics, 2016 – current

Consultant, City of Lawrence Utilities Department, 2013 – current

Consultant for Aerobic Granular Sludge, Black & Veatch Engineering, 2014-2015

Intern, Division of Extramural Research & Training,

National Institute of Environmental Health Sciences, 1998

OTHER UNIVERSITY AFFILIATIONS

Affiliated Faculty, Bioengineering Graduate Program, University of Kansas, 2009 – current

Affiliated Faculty, Environmental Studies Program, 2011 – current

Affiliated Faculty, Center for Environmental Policy, Institute for Policy & Social Research,
University of Kansas, 2007 – current

Faculty Advisor, Center for Research on Global Change, Institute for Policy & Social Research,
University of Kansas, 2007 – 2015

HONORS AND AWARDS

The Edward & Thelma Wohlgemuth Faculty Scholar, 2016
Miller Scholar, School of Engineering, University of Kansas, 2016
Keeler Family Intra-University Professorship, University of Kansas, 2016
Water Environment Federation's 5S Society Award (Select Society of Sanitary Sludge Shovelers), KWEA, 2015
Miller Scholar, School of Engineering, University of Kansas, 2015
Graduate Teaching Achievement Recognition, Center for Teaching Excellence, University of Kansas, 2013
Excellence in Environmental Engineering, 2012 Honor Award for University Research, American Academy of Environmental Engineers
Miller Award for Distinguished Professional Service, School of Engineering, University of Kansas, 2012
Gould Award for Outstanding Undergraduate Advisor, School of Engineering, University of Kansas, 2012
Bellows Scholar, School of Engineering, University of Kansas, 2010
Fellow, University of Kansas, Center for Teaching Excellence Best Practices Institute, 2007
Nominated for Best Oral Presentation, SBR3 Conference, 2004
US Department of Education GAANN Fellowship, 2000-2004
GE Graduate Fellowship, University of Notre Dame, 2000-2001
James M. Johnston Undergraduate Fellowship, 1996-2000

PROFESSIONAL SERVICE

Water Environment Federation Member, 2003 – current
Nutrient Conference Chair, 2017 – current
Municipal Resource Recovery Design Committee Member, 2013 – current
WEFTEC Program Committee Member (Municipal Design Symposium), 2013 – current
Co-Chair, 2018 – current
Algae Technologies Task Force Member, 2009 – current
Advisor for University of Kansas student chapter, 2011 – current
Member State Chapter Kansas Water Environment Federation, 2007 – current
Algae Technologies Workshop at WEFTEC, Organizing Member, 2013
Annual Literature Review Committee, *Water Environment Research*, 2003 – 2010
International Water Association Member, 2004 – current
USA National Committee, 2016 – current
Microbial Ecology in Water Engineering Management Committee, 2013 – current
Microbial Ecology in Water Engineering, 2004 – current
Aerobic Granule Sludge Workshop Organizing Committee, Munich, Germany, 2004
Association of Environmental Engineering and Science Professors Member, 2006 – current
American Water Works Association Member, 2013 – current
Advisor for University of Kansas student chapter, 2014 – current
American Association for the Advancement of Science, 2018 - current
American Institute of Chemical Engineers Member, 2010 – 2013
Annual Meeting Session Chair, Advances in Algal Biorefineries I and II, 2013 – 2014
Annual Meeting Session Co-chair, Advances in Algal Biorefineries I and II, 2012

Annual Meeting Chair, Sustainable Fuels from Renewable Resources I, 2012 – 2013
Peer-Reviewer, *Environmental Science & Technology*, *Water Research*, *Biotechnology & Bioengineering*, *Applied Biochemistry and Biotechnology*, *Algal Research*
Peer-Reviewer, National Science Foundation (2009, 2011, 2012, 2015, 2016)
Mentor, United States Department of State Junior Faculty Development Program, 2012
Educator, Douglas County Water Festival at the University of Kansas Field Station, 2009
PhD Examiner, Department of Environmental Engineering, University of Bari, Italy, 2006

PUBLICATIONS (maiden name McSwain; corresponding author denoted by *)

Books and Book Chapters

Bathe S, de Kreuk MK, McSwain BS, Schwarzenbeck N, Eds. April 2005. *Aerobic Granular Sludge*. *Water Environment Management Series (WEMS)*, IWA Publishing, ISBN 1843395096.

Peer-Reviewed Publications

- Fortier M-OP, Roberts GW, Stagg-Williams SM, and Sturm BSM*. 2017. "Determination of the life cycle climate change impacts of land use and albedo change in algal biofuel production." *Algal Research*, 28, 270-281. <https://doi.org/10.1016/j.algal.2017.06.009>
- Huang Y, Yasarer LMW, Li Z*, Sturm BSM, Zhang Z, Guo J, and Shen Y. 2017 "Air-water CO₂ and CH₄ fluxes along a river-reservoir continuum: case study in the Pengxi River, a tributary of the Yangtze River in the Three Gorges Reservoir, China." *Environmental Monitoring Assessment*, 189(5), 223. DOI 10.1007/s10661-017-5926-2.
- Yasarer L*, Sinnathamby S, and Sturm B. 2016. "Impacts of biofuel-based land-use change on water quality and sustainability in a Kansas watershed." *Agricultural Water Management*, 175, 4-14.
- Yasarer LMW*, Sturm BSM, and White SS. 2016. "Climate change and Kansas water management: Perspectives and opportunities." *Transactions of the Kansas Academy of Science*, 119(2), 113-128.
- Gentry J, Sturm B, and Peterson AT*. 2016. "Predictive mapping of transmission risk of a soil-transmitted helminth across East Africa: Findings from community prevalence surveys." *Journal of Public Health in Developing Countries*, 2(2), 150-161.
- Yasarer LMW and Sturm BSM*. 2016. "Potential impacts of climate change on reservoir services and management approaches." *Lake and Reservoir Management*, 32(1), 13-26.
- Bambic DG, Kildare-Hann BJ, Rajal VB, Sturm BSM, Minton CB, Schriewer A, and Wuertz S*. 2015. "Spatial and hydrologic variation of Bacteroidales, Adenovirus and Enterovirus in a semi-arid, wastewater effluent-impacted watershed." *Water Research*, 75, 83-94.
- Roberts GW, Sturm BSM, Hamdeh U, Stanton GE, Rocha A, Kinsella TL, Fortier M-O, Sazdar S, Detamore MS, and Stagg-Williams SM*. 2015. "Promoting catalysis and high-value product streams by in-situ hydroxyapatite crystallization during hydrothermal liquefaction of microalgae cultivated with reclaimed nutrients." *Green Chemistry*, 17(4), 2560-2569.
- Fortier M-OP, Roberts GW, Stagg-Williams SM, and Sturm BSM*. 2014. "Life cycle assessment of bio-jet fuel from hydrothermal liquefaction of microalgae." *Applied Energy*, 122, 73-82.
- Witthaus LM*, Smith VH, Sturm BSM, and Carney E. 2014. "Evaluation of empirical models coupled with EUTROMOD for water quality prediction in Kansas reservoirs." *Inland Waters*, 4, 167-178.

- Peterson J*, Caldas M, Bergtold J, McSwain Sturm B, Graves R, Earnhart D, Hanley E, Brown J. 2014. "Economic linkages to changing landscapes." *Environmental Management*, 53(1), 55-66.
- Bode C*, Criss M, Ising A, McCue S, Ralph S, Sharp S, Smith V, and Sturm B. 2014. "Pond Power: How to use algae to energize inquiry and interdisciplinary connections." *The Science Teacher*, 81 (2), 43-49.
- Chen X, Peltier E*, Sturm BSM, and Young CB. 2013. "Quantification of nitrifying and denitrifying bacteria in a stormwater bioretention system." *Water Research*, 47(4), 1691-1700.
- Roberts GW, Fortier M-O, Sturm BSM, and Stagg-Williams SM*. 2013. "Promising pathway for algal biofuels through wastewater cultivation and hydrothermal conversion." *Energy & Fuels*, 27 (2), 857-867.
- Antezana Zbinden MD, Sturm BSM, Nord RD, Carey WJ, Moore D, Shinogle H, and Stagg-Williams SM*. 2013. "Pulsed electric field (PEF) as an intensification pretreatment for solvent lipid extraction from microalgae." *Biotechnology & Bioengineering*, 110 (6), 1605-1615.
- Fortier M-O and Sturm BSM*. 2012. "Geographic analysis of the feasibility of collocating algal biomass production with wastewater treatment plants." *Environmental Science & Technology*, 46 (20), 11426–11434.
- Sturm BSM*, Peltier E, Smith V, and deNoyelles F. 2012. "Controls of microalgal biomass and lipid production in municipal wastewater-fed bioreactors." *Environmental Progress & Sustainable Energy*, 31(1), 10-16.
- Yang C, Guo JS, Sturm BSM, Lane RF, Adams CD, and Carter RE. 2012. "Impact of sludge retention time on pharmaceuticals removal in activated sludge system." *China Water & Wastewater*, 28(13), 99-102.
- Yang C, Guo JS, Sturm BSM, Lane RF, Adams CD, and Carter RE. 2012. "Impact of sludge residence time on the relative biodegradation and biosorption of sulfonamide antibiotics in activated sludge." *Journal of Chongqing University*, 6, 12.
- Sturm BSM* and Lamer SL. 2011. "An energy evaluation of coupling nutrient removal from wastewater with algal biomass production." *Applied Energy*, 88, 3499-3506.
- Smith VH, Sturm BSM*, Billings S, deNoyelles FJ. 2009. "Ecological aspects of algal biodiesel production." *Trends in Ecology & Evolution*, 25(5), 301-309.
- Knapp CW*, Zhang W, Sturm BS, and Graham DW. 2010. "Differential fate of erythromycin and beta-lactam resistance genes from swine lagoon waste under different aquatic conditions." *Environmental Pollution*, 158(5), 1506-1512.
- Zhang W, Sturm BS*, Knapp CW, and Graham DW. 2009. "Accumulation of tetracycline resistance genes in aquatic biofilms due to periodic loadings from swine lagoons." *Environmental Science & Technology*, 43(20), 7643-7650.
- Mohan SV, Falkentoft C, Nancharaiah YV, McSwain Sturm BS, Wattiau P, Wuertz S, and Hausner M*. 2009. "Bioaugmentation of microbial communities in laboratory and pilot scale sequencing batch biofilm reactors using the TOL plasmid." *Bioresource Technology*, 100(5), 1746-1753.
- McSwain Sturm BS* and Irvine RL. 2008. "Dissolved oxygen as a key parameter to aerobic granule formation." *Water Science and Technology*, 58(4), 781-787.

- Rajal VB, McSwain BS, Thompson DE, Leutenegger CM, and Wuertz S*. 2007. "Molecular quantitative analysis of human viruses in California stormwater." *Water Research*, 41(19), 4287-4298.
- Kildare BJ, Leutenegger CM, McSwain BS, Bambic DG, Rajal VB, and Wuertz S*. 2007. "16S rRNA-based assays for quantitative detection of universal, human-, cow-, and dog-specific fecal *Bacteroidales*: a bayesian approach." *Water Research*, 41(16), 3701-3715.
- Rajal VB, McSwain BS, Thompson DE, Leutenegger C, Kildare B, and Wuertz S*. 2007. "Validation of hollow fiber ultrafiltration and real-time PCR using bacteriophage PP7 as surrogate for the quantification of viruses from water samples." *Water Research*, 41(7), 1411-1422.
- McSwain BS*, Irvine RL, Hausner M., and Wilderer PA. 2005. "Composition and distribution of extracellular polymeric substances in aerobic flocs and granular sludge." *Applied and Environmental Microbiology*, 71(2), 1051-1057.
- McSwain BS*, Irvine RL, and Wilderer PA. April 2005. "Population dynamics during aerobic granule formation – lessons from denaturing gradient gel electrophoresis." *Water Environment Management Series (WEMS)*, ISBN 1843395096, 53-61.
- McSwain BS*, Irvine RL, and Wilderer PA. 2004. "The influence of settling time on the formation of aerobic granules and extracellular polymeric substances." *Water Science and Technology*, 50(10), 195-202.
- McSwain BS*, Irvine RL, and Wilderer PA. 2004. "The effect of intermittent feeding on aerobic granule structure." *Water Science and Technology*, 49(11-12), 19-25.
- Wilderer PA* and McSwain BS. 2004. "The SBR and its biofilm application potentials." *Water Science and Technology*, 50(10), 1-10.
- Chiavola A*, McSwain BS, Irvine RL, Boni MR, and Baciocchi R. 2004. "Biodegradation of 3-chlorophenol in a sequencing batch reactor." *Environmental Science & Health (Part A)*, 38(10), 2113-2123.
- Schwarzenbeck N*, Erley R, McSwain BS, Wilderer PA, and Irvine RL. 2004. "Treatment of malthouse wastewater in a granular sludge SBR." *Acta hydrochimica et hydrobiologica*, 32(1), 16-24.

Engineering Reports

- Sturm, B. 2016. "Intensification of resource recovery (IR²) forum: State of knowledge and workshop report." Contract No. TIRR1R15, Water Environment Research Foundation.
- McSwain BS, Kildare B, Bae S, Lorente M and Wuertz S. June 2006. "Management of pathogens associated with storm water discharge and identification of sources of microbial contamination." Contract No. 43A0168, Task Order No. 3, Environmental Division of the California Department of Transportation, 104 pp.
- Kildare B, Rajal VB, Tiwari S, Thompson DE, McSwain BS, Bambic D, Reide G, and Wuertz S. May 2006. "Calleguas Creek Watershed Quantitative Microbial Source Tracking Study." Calleguas Creek Watershed Management Plan.
- Rajal V, Thompson D, Kildare B, Tiwari S, McSwain B and Wuertz S. May 2005. "Management of pathogens associated with storm water discharge: Methodology for quantitative molecular determination of viruses, bacteria and protozoa." Contract No. 43A0073, Task Order No. 19, Environmental Division of the California Department of Transportation.

Conference Proceedings / Minor Publications

- Ngo N, Liu X, Van Winckel T, Massoudieh A, Kjellerup BV, Takács I, Wett B, Mancell-Egala W, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir H. 2017. "Experimental metrics to predict the flocculent settling coefficient in a 1D settler model". *Proceedings of the Water Environment Federation*, 4, 5431-5435.
- Alimoradi S, Hable R, Stagg-Williams S, and Sturm B. 2017. "Fate of phosphorous after thermochemical treatment of algal biomass". *Proceedings of the Water Environment Federation*, 8, 3888-3891.
- Ibrahim A, Peltier E, and Sturm B. 2017. "Halophilic and nonhalophilic aerobic granular sludge formation in hypersaline synthetic oilfield produced water". *Proceedings of the Water Environment Federation*, 16, 141-152.
- Faraj R, Sturm, B, Amante T, and Mosquera M. 2017. "Implementation of an External Selector to Improve the Stability and Nutrient Removal of Aerobic Granular Sludge with Low-Strength Municipal Wastewater". *Proceedings of the Water Environment Federation*, 3, 461-467.
- Van Winckel T, Yapuwa H, Wett B, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir H. 2017. "It's time to harvest: Combining internal selection and flocculent external selection to maximize carbon capture efficiency". *Proceedings of the Water Environment Federation*, 7, 4294-4296.
- Bagchi S, Hiripitiyage YD, Willoughby A, Ford A, Havsteen L, Bachmann B, Constantine T, Wett B, Bott C, and Sturm B. 2017. "Microbial community analysis revealed the selective retention of functionally important microorganisms by hydrocyclones in biological nutrient removal (BNR) processes". *Proceedings of the Water Environment Federation*, 7, 4012-4022.
- Liu X, Van Winckel T, Kjellerup BV, Takacs I, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir H. 2017. "Pinpointing bioflocculation limitations for enhanced carbon management in high-rate activated sludge". *Proceedings of the Water Environment Federation*, 3, 47-52.
- Pendelberry KJ, Gilmore KR, Sturm BS, and Faraj R. 2017. "Practical imaging techniques for monitoring granulation of activated sludge". *Proceedings of the Water Environment Federation*, 16, 111-123.
- Alimoradi S, Hable R, Stagg-Williams S, and Sturm B. 2017. "Strategies to maximize P recovery and minimize biochar formation from hydrothermal liquefaction of biomass". *Proceedings of the Water Environment Federation*, 3, 529-536.
- Faraj R, Sturm B, Amante T, and Mosquera M. 2017. "Implementation of an external selector to improve the stability and nutrient removal of aerobic granular sludge with low-strength municipal wastewater". *Proceedings of the Water Environment Federation*, 3, 461-467.
- Liu X, Winckel TV, Kjellerup BV, Tacaks I, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir HD. 2017. "Pinpointing bioflocculation limitations for enhanced carbon management in high-rate activated sludge". *Proceedings of the Water Environment Federation*, 3, 47-52.
- Bagchi S, Probasco S, Mardan Doost B, and Sturm B. 2016. "Fate of microplastics in water resource recovery facilities (WRRFs) and national environmental loading estimates". *Proceedings of the Water Environment Federation*, 7, 353-361.
- Martin K, Shaw A, De Clippeleir H, and Sturm B. 2016. "Accidental Granular Sludge': Understanding process design and operational conditions that lead to low SVI-30 values through a survey of full scale facilities in North America". *Proceedings of the Water*

- Environment Federation*, 9, 3385-3394.
- Sturm B, Faraj R, Amante T, Kambhampati S, and Warren J. 2016. "Impact of substrate profile on BNR performance in aerobic granular sludge pilots at the Lawrence, KS WWTP". *Proceedings of the Water Environment Federation*, 9, 5470-5478.
- Van Winckel T, De Clippeleir H, Mancell-Egala A, Rahman A, Wett B, Bott C, Sturm B, Vlaeminck S, Al-Omari A, and Murthy S. 2016. "Balancing flocs and granules by external selectors to increase capacity in high-rate activated sludge systems". *Proceedings of the Water Environment Federation*, 6, 5617-5622.
- Alimoradi S, Hable R, Perkins A, Stagg-Williams S, and Sturm B. 2016. "Phosphorus recovery as calcium phosphates during thermochemical conversion of algal biomass". In *WEF/IWA Nutrient Removal and Recovery Proceedings*. Water Environment Federation, Denver, CO.
- Bagchi S, Epperson R, and Sturm B. 2016. "Evidence of complete ammonia oxidation (comammox) by *Nitrospira* under low dissolved oxygen in a side stream deammonification pilot". In *WEF/IWA Nutrient Removal and Recovery Proceedings*. Water Environment Federation, Denver, CO.
- Jezek R, Shaw A, Kobylinski E, Sturm B, Steichen M, and Barnard J. 2016. "Somewhere over the rainbow: Kansas' aerobic granular sludge pilot for domestic wastewater in the U.S". In *Singapore International Water Week 2016 Proceedings*.
- Van Winckel T, De Clippeleir H, Yapuwa H, Wett B, Bott C, Sturm B, Vlaeminck S, Al-Omari A, and Murthy S. 2016. "Let's Settle Together? Extending external selection from mainstream deammonification to high-rate activated sludge". In *WEF/IWA Nutrient Removal and Recovery Proceedings*. Water Environment Federation, Denver, CO.
- Jezek R, Kobylinski E, Sturm B, Steichen M, and Barnard J. 2015. "Can Aerobic Granular Reactors Help a Land-Locked Plant Upgrade to BNR? From Bench-Scale Testing to Full-Scale Conceptual Design." *Proceedings of the Water Environment Federation*, 16, 2760-2783.
- Jezek R, Kobylinski E, Sturm B, Steichen M, and Barnard J. 2015. "Aerobic granular sludge bench-scale testing to full-scale conceptual design". *Proceedings of the Water Environment Federation*, 3, 1-22.
- Sturm B, Faraj R, Amante T, Wagner B, Kiani F, and Waybenais D. 2015. "Strategies for Operating Aerobic Granular Sludge Reactors for Low-Strength Municipal Wastewater." *Proceedings of the Water Environment Federation*, 17, 5656-5665.
- Sturm B, Roberts G, Cook E, Hable R, and Stagg-Williams S. 2015. "Hydroxyapatite Crystallization and Biocrude Oil Production from Wastewater-Cultivated Algae." *Proceedings of the Water Environment Federation*, 2, 1-11.
- Faraj RA and Sturm BSM. 2014. "The effect of slowly biodegradable carbon on the performance of aerobic granular sludge." *International Water Association Specialist Conference - Global Challenges: Sustainable Wastewater Treatment and Resource Recovery*. Kathmandu, Nepal.
- Fortier M-O and Sturm BSM. 2012. "Geographic Analysis of Algae Production for Biofuels at Kansas Wastewater Treatment Plants." *Proceedings of the Water Environment Federation*, 13, 3565-3580.
- Bergsven L, Sturm BSM, Durar A, and Dickinson G. 2011. "After Over a Decade of Foaming, the Development of a Statistical Model Combined with Traditional Microscopy Provides Operating Guidelines." *Proceedings of the Water Environment Federation*, 10, 5422-5437.

Non-Peer Reviewed Publications

- Gu AZ, Nerenberg R, Sturm B, Chul P, and Goel R. 2010 Literature Review. "Molecular Methods in Biological Systems." *Water Environment Research*, 82(10), 908-930.
- McMahon K, Gu A, Nerenberg R, and Sturm B. 2009 Literature Review. "Molecular Methods in Biological Systems." *Water Environment Research*, 81(10), 986-1002.
- McMahon K, Gu A, Nerenberg R, and Sturm B. 2008 Literature Review. "Molecular Methods in Biological Systems." *Water Environment Research*, 80(10), 929-961.
- Sharma K, McSwain BS, Zhang X, Lin W, and Yu T. 2007 Literature Review. "Biological Fixed Film Systems." *Water Environment Research*, 79(10), 1363-1391.
- Lin W, McSwain BS, Sharma K, Zhang X, and Yu T. 2006 Literature Review. "Biological Fixed Film Systems." *Water Environment Research*, 78(10), 1324-1362.
- Yu T, Lin W, McSwain BS, Yu M, and Zhang X. 2005 Literature Review. "Biological Fixed Film Systems." *Water Environment Research*, 77(6), 1263-1346.
- Lin W, Yu T, McSwain BS, and He YS. 2004 Literature Review. "Biological Fixed Film Systems." *Water Environment Research*, 76(6), 1099-1154.
- Yu T, Lin W, Tian E, and McSwain BS. 2003 Literature Review. "Biological Fixed Film Systems." *Water Environment Research*, 75(6), 421-504.

INVITED ORAL PRESENTATIONS

International

- "Implementing aerobic granular sludge in continuous WTT-processes." March 18, 2018. *Granular Sludge Conference, IWA Biofilms Specialist Group*, Delft, the Netherlands.
- "The effect of slowly biodegradable carbon on the performance of aerobic granular sludge." October 30, 2014. *International Water Association Specialist Conference Global Challenges: Sustainable Wastewater Treatment and Resource Recovery*, Kathmandu, Nepal.
- "A Sustainable Platform for Biofuels Production: Coupling nutrient removal from wastewater with algal biomass production." September 1, 2014. Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences, Chongqing, China.

National

- "WE&RF Project Update: Balancing Granules and Flocs for Process Intensification". September 24, 2016. *Water Environment Federation's Annual Technical Exhibition and Conference, Aerobic Granular Sludge Workshop*, New Orleans, LA.
- "Resource recovery using thermochemical processing of wastewater biosolids." August 29, 2016. University of Notre Dame, Department of Civil & Environmental Engineering & Earth Sciences, South Bend, IN.
- "Wastewater characteristics in North-America: challenges for aerobic granulation." October 2, 2015. Workshop: Aerobic granulation in existing facilities, DC Water, Washington D.C.
- "Intensification in action". August 9, 2015. *Water Environment Federation Intensification of Resource Recovery (IR²)*, Manhattan College, Riverdale, NY.
- "Waste to energy to higher-value products: hydroxyapatite crystallization and biocrude oil production from wastewater-cultivated algae." February 13, 2015. Environmental Engineering and Water Resources Engineering Seminar, University of Nebraska, Omaha, NE.
- "Research in Algae for Nutrient Uptake." March 28, 2014. Metropolitan Water Reclamation District of Greater Chicago, Chicago, IL.
- "Early career advice for new faculty." October 25, 2013. *Society of Women Engineers National Conference*, Baltimore, MD.

- “Algal ecology.” October 8, 2013. *Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, Chicago, IL.
- “Systems analyses of coupling nutrient removal from wastewater with algal biomass production: LCA, land availability, and energy balances.” September 9, 2013. Civil and Environmental Engineering Department Seminar, University of Illinois at Urbana-Champaign.
- “A sustainable platform for biofuels production: coupling nutrient removal from wastewater with algal biomass production.” March 15, 2012. Civil Engineering Department Seminar, University of Arkansas, Fayetteville, AK.
- “Survival and migration of antibiotic resistant genes in the water column and biofilm environments.” April 3, 2009. Environmental Engineering & Water Resources Seminar, University of Missouri, Columbia, Missouri.
- “Coselection of copper- and antibiotic-resistant bacteria in activated sludge reactors.” November 2, 2007. Department of Civil and Environmental Engineering, The University of Iowa, Iowa City, Iowa.
- “From Hurricane Katrina Floodwaters to Rural Wine Country: Using quantitative PCR to monitor pathogens and fecal contamination in storm waters.” Feb, 20, 2006. Oral Seminar for the Department of Civil & Environmental Engineering, Purdue University, West Lafayette, Indiana.

Statewide

- “Granular sludge applications for wastewater treatment.” April 1, 2013. University of Kansas Civil, Environmental & Architectural Engineering Professional Development Series, offered as continuing education credit at Burns & McDonnell, 9400 Ward Parkway, Kansas City, Missouri.
- “Wastewater solutions: Treatment of wet-weather flows”. March 23, 2015. University of Kansas, Department of Civil, Environmental & Architectural Engineering Professional Development Series, offered as continuing education credit at Burns & McDonnell, 9400 Ward Parkway, Kansas City, Missouri.
- “Activated sludge microbiology – identifying the undesirables and designing against them.” May 2, 2011. University of Kansas Civil, Environmental & Architectural Engineering Professional Development Series, offered as continuing education credit at Burns & McDonnell, 9400 Ward Parkway, Kansas City, Missouri.
- “The impact of sludge residence time on the removal of synthetic estrogen in biological wastewater treatment.” March 24, 2009. University of Kansas Civil, Environmental & Architectural Engineering Professional Development Series, offered as continuing education credit at Burns & McDonnell, 9400 Ward Parkway, Kansas City, Missouri.
- “Measures of Water Quality for Pathogen TMDL Development.” Feb 19, 2007. University of Kansas Civil, Environmental & Architectural Engineering Professional Development Series, offered as continuing education credit at Burns & McDonnell, 9400 Ward Parkway, Kansas City, Missouri.

Local

- “Sludge Dewaterability: The Basics and new considerations with Biological Nutrient Removal.” February 26, 2018. Professional Development Seminar, University of Kansas Department of Civil, Environmental & Architectural Engineering, Kansas City, Missouri.

- “Municipal wastewater: Transforming a problem into our sustainable future.” November 27, 2017. Kansas University Center for Research, Lawrence, KS.
- “A new spin on BNR: Employing hydrocyclones for process intensification.” April 19, 2017. The University of Kansas 67th Environmental Engineering Conference, Lawrence, KS.
- “Resource recovery using thermochemical processing of wastewater biosolids from algal biological treatment.” March 16, 2017. The University of Kansas Environmental Studies / Geography Colloquium, Lawrence, KS.
- “Biological nutrient removal in wastewater treatment - engineering approaches to manipulate species selection.” September 9, 2016. Kansas Biological Survey, Lawrence, KS.
- “Solid waste in our built environment.” January 23, 2016. *Future Cities Regional Competition*, Lawrence, KS.
- “Testing a New Biofilm Application – Aerobic Granular Sludge.” April 22, 2015. 65th Annual Environmental Engineering Conference, University of Kansas.
- “Wastewater treatment and microbial ecology.” October 17, 2014. University of Kansas Red Hot Research, Lawrence, KS.
- “Modeling field-level irrigation demands with changing weather and crop choices.” September 26, 2014. Kansas Water: Research and Communication, From Data to News, Lawrence, KS.
- “Systems analyses of coupling nutrient removal from wastewater with algal biomass production.” October 1, 2013. Chemical and Petroleum Engineering Department Seminar, University of Kansas.
- “Envisioning wastewater as a resource.” April 13, 2013. Global Water Conference: Drought conservation & security, University of Kansas, Lawrence, KS.
- “Understanding Farmers’ Land- and Water-use Decisions in a Changing Climate and Biofuel Economy.” October 26, 2012. Sustainability Forum, University of Kansas, Lawrence, KS.
- “Encouraging synthesis of laboratory data with scientific literature.” August 17, 2010. *KU Summit for Teaching: Firm foundations for learning*, Lawrence, KS.
- “Preparing for class: ways to make it happen.” February 17, 2010. University of Kansas Center for Teaching Excellence, Lawrence, Kansas.
- “The promise of coupling nutrient removal from wastewater with algal oil production – preliminary results of a pilot study.” Feb 3, 2010. 60th *Environmental Engineering Conference: Designing for Sustainability*, Lawrence, Kansas.
- “Preparing students before they come to class.” January 12, 2010. KU School of Engineering Faculty Teaching Workshop “Technology in the Classroom,” Lawrence, Kansas.
- “KU Feedstock to Tailpipe Initiative: Algal Production.” April 9, 2009. Transportation Research Institute Colloquium, Lawrence, Kansas.
- “Production of algae as a feedstock for biodiesel production.” June 6, 2008. Transportation Research Institute Colloquium, Lawrence, Kansas.
- “A mesocosm study: The survival and migration of antibiotic resistant genes in the water column and biofilm environments.” November 30, 2007. Kansas Biological Survey, Lawrence, Kansas.
- “Biofilms in engineered systems: factors of their formation and function.” Department of Chemical & Petroleum Engineering’s Spring seminar series, University of Kansas, Lawrence, Kansas.
- “The application of microbial source tracking in water quality monitoring for TMDL development.” Feb 7, 2007. Oral presentation at the 57th *Environmental Engineering Conference: Striving Toward Sustainability*, Lawrence, Kansas.

- “More than continuing ed: bridging the gap between research and practice.” January 26, 2007. Kansas Water Environment Association Young Professionals Meeting, Topeka, Kansas.
- “Aerobic Granular Sludge Formation: Using a multidisciplinary approach to describe the critical processes.” April 3, 2006. Oral Seminar for the Department of Civil, Environmental & Architectural Engineering, University of Kansas, Lawrence, Kansas.

CONFERENCE PRESENTATIONS (Underline denotes presenting author)

Oral Presentations

- Sturm B, Faraj R, and Jimenez J. “Modelling extracellular polymeric substances in granular sludge formed with low strength municipal wastewater.” March 20, 2018. *Granular Sludge Conference, IWA Biofilms Specialist Group*, Delft, the Netherlands.
- Ngo N, Liu X, Van Winckel T, Massoudieh A, Kjellerup BV, Takács I, Wett B, Mancell-Egala W, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir H. October 4, 2017. “Experimental metrics to predict the flocculent settling coefficient in a 1D settler model”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Van Winckel T, Yapuwa H, Wett B, Sturm B, Vlaeminck SE, Al-Omari A, Murthy S, and De Clippeleir H. October 4, 2017. “It's time to harvest: Combining internal selection and flocculent external selection to maximize carbon capture efficiency”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Bagchi S, Hiripitiyage YD, Willoughby A, Ford A, Havsteen L, Bachmann B, Constantine T, Wett B, Bott C, and Sturm BSM. October 4, 2017. “Microbial community analysis revealed the selective retention of functionally important microorganisms by hydrocyclones in biological nutrient removal (BNR) processes”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Sturm B. October 3, 2017. “Determining the internal selection / substrate gradient needed to induce granulation for low-strength wastewater”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Ibrahim A, Sturm B, and Peltier E. October 2, 2017. “Halophilic and nonhalophilic aerobic granular sludge formation in hypersaline synthetic oilfield produced water”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Pendelberry KJ, Gilmore KR, Sturm B, and Faraj R. October 2, 2017. “Practical imaging techniques for monitoring granulation of activated sludge”. *Water Environment Federation's Annual Technical Exhibition and Conference (WEFTEC)*, Chicago, IL.
- Faraj R, Amante T, Warren J, Mosquera M, and Sturm B. October 2, 2017. “The impact of applying an internal substrate selection strategy to improve aerobic granular sludge formation”. *Water Environment Federation's Annual Technical Exhibition and Conference*, Chicago, IL.
- Sturm B. August 29, 2017. “Hydrocyclones Retain Functionally-Important Microorganisms in Biological Nutrient Removal”. *9th Annual Joint KWEA and KsAWWA Water / Wastewater Conference*, Wichita, KS.
- Alimoradi S, Sturm B, Hable R, and Stagg-Williams S. June 21, 2017. “Nutrient recovery from algal biomass during thermochemical treatment - phosphorus recovery application”. *The 7th International Conference on Algal Biomass, Biofuels and Byproducts*, Miami, FL, USA.
- Hable R, Alimoradi S, Benson S, White C, Stagg-Williams S, and Sturm B. November 13, 2016. “Simultaneous solid phosphorus recovery and biocrude production through hydrothermal liquefaction of algae”. *American Institute of Chemical Engineers*, San Francisco, CA.

- Stagg-Williams S, Hable R, Alimoradi S, and Sturm B. October 26, 2016. "Synthesis of calcium phosphates during thermochemical conversion of algal biomass". *ACS Midwest Regional Meeting*, Manhattan, KS.
- Bagchi S, Probasco S, Mardan Doost B, and Sturm B. September 28, 2016. "Fate of Microplastics in Water Resource Recovery Facilities (WRRFs) and National Environmental Loading Estimates". *Water Environment Federation's Annual Technical Exhibition and Conference*, New Orleans, LA. *Proceedings of the Water Environment Federation*: (7), 353-361.
- Martin K, Shaw A, De Clippeleir H, and Sturm B. September 27, 2016. "Accidental Granular Sludge?": Understanding process design and operational conditions that lead to low SVI-30 values through a survey of full scale facilities in North America". *Water Environment Federation's Annual Technical Exhibition and Conference*, New Orleans, LA. *Proceedings of the Water Environment Federation*: (9), 3385-3394.
- Sturm B, Faraj R, Amante T, Kambhampati S, and Warren J. September 27, 2016. "Impact of Substrate Profile on BNR Performance in Aerobic Granular Sludge Pilots at the Lawrence, KS WWTP". *Water Environment Federation's Annual Technical Exhibition and Conference*, New Orleans, LA. *Proceedings of the Water Environment Federation*: (9), 5470-5478.
- Sturm B. September 27, 2016. "Defining Granular Sludge and Process Intensification Benefits". *Water Environment Federation's Annual Technical Exhibition and Conference*, New Orleans, LA.
- Van Winckel T, De Clippeleir H, Mancell-Egala A, Rahman A, Wett B, Bott C, Sturm B, Vlaeminck S, Al-Omari A, and Murthy S. September 27, 2016. "Balancing flocs and granules by external selectors to increase capacity in high-rate activated sludge systems". *Water Environment Federation's Annual Technical Exhibition and Conference*, New Orleans, LA. *Proceedings of the Water Environment Federation*.
- Jezek R, Shaw A, Kobylinski E, Sturm B, Steichen M, Barnard JL, Pekarek S. September 12, 2016. "Start-up and evaluation of an aerobic granular sludge (AGS) pilot." *Virginia Water Environment Association WaterJAM*, Virginia Beach, VA.
- Sturm B and Bagchi S. August 31, 2016. "Fate of micro plastics through wastewater treatment plants". *8th Annual Joint KWEA and KsAWWA Water / Wastewater Conference*, Topeka, KS.
- Jezek R, Shaw A, Kobylinski E, Sturm B, Steichen M, and Barnard J. July 12, 2016. "Somewhere over the rainbow: Kansas' aerobic granular sludge pilot for domestic wastewater in the U.S". *Singapore International Water Week 2016*, Singapore.
- Alimoradi S, Hable R, Perkins A, Stagg-Williams S, and Sturm B. July 11, 2016. "Phosphorus recovery as calcium phosphates during thermochemical conversion of algal biomass". *WEF/IWA Nutrient Removal and Recovery*, Water Environment Federation, Denver, CO.
- Bagchi S, Epperson R, and Sturm B. July 11, 2016. "Evidence of complete ammonia oxidation (comammox) by *Nitrospira* under low dissolved oxygen in a side stream deammonification pilot". *WEF/IWA Nutrient Removal and Recovery*, Water Environment Federation, Denver, CO.
- Van Winckel T, De Clippeleir H, Yapuwa H, Wett B, Bott C, Sturm B, Vlaeminck S, Al-Omari A, and Murthy S. July 11, 2016. "Let's Settle Together? Extending external selection from mainstream deammonification to high-rate activated sludge". In *WEF/IWA Nutrient Removal and Recovery Proceedings*. Water Environment Federation, Denver, CO.
- Hable R, Roberts G, Perkins A, Sturm B, and Williams S. November 8, 2015. "The Impact of Algal Growth Conditions on the Hydrothermal Liquefaction Products". *AIChE Annual*

Conference, Salt Lake City, Utah.

Sturm B, Faraj R, Amante T, Wagner B, Kiani F, and Waybenais D. September 28, 2015.

“Strategies for operating aerobic granular sludge reactors for low-strength municipal wastewater”. *Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, Chicago, Illinois.

Jezeck R, Kobylinski E, Steichen M, Barnard J, and Sturm B. July 28, 2015. “Aerobic granular sludge bench-scale startup and testing to full-scale conceptual design”. *Water Environment Federation Nutrient Symposium 2015*, San Jose, CA.

Sturm B, Roberts G, Cook E, Hable R, and Stagg-Williams S. June 10, 2015. “Hydroxyapatite crystallization and biocrude oil production from wastewater-cultivated algae”. *WEF Water and Energy 2015 Opportunities for Energy and Resource Recovery in a Changing World*, Washington D.C.

Fortier M-O, Roberts GW, Stagg -Williams SM, and Sturm BSM. November 18, 2014.

"Geographically specific life cycle assessment of biofuels from wastewater microalgae." *American Institute of Chemical Engineers Annual Meeting*, Atlanta, GA.

Roberts GW, Fortier M-O, Sturm BSM, and Stagg-Williams SM. November 18, 2014.

"Facilitation of high value products during liquefaction of wastewater cultivated algae." *American Institute of Chemical Engineers Annual Meeting*, Atlanta, GA.

Yasarer LW, Li Z, and Sturm B. November 14, 2014. “Estimating Methane and Carbon Dioxide Emissions from the Three Gorges Reservoir, China”. *North American Lake Management Society 34th International Symposium*, Tampa, FL.

Fortier M-O, Roberts GW, Stagg -Williams SM, and Sturm BSM. October 2, 2014. "Land use change impacts by cultivation location: a geographic life cycle assessment of biofuels from wastewater algae." *Algae Biomass Summit*, San Diego, CA.

Sturm BSM and Faraj R. August 26, 2014. “Performance of granular sludge reactors for complete biological nutrient removal.” *Kansas Water Environment Association and Kansas American Water Works Association 6th Joint Annual Conference*, Topeka, KS.

Yasarer LW, Sinnathamby S, and Sturm B. June 2, 2014. “Investigating Impacts of Biofuel-Based Landscapes on Kansas Reservoir Water Quality Using the SWAT Model”. *EWRI World Environment and Water Resources Congress*, Portland, OR.

Roberts GW, Fortier M-O, Sturm B, and Stagg-Williams SM. November 7, 2013. “Hydrothermal liquefaction of wastewater derived green alga.” *American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA.

Roberts GW, Gupta A, Fortier M-O, Rocha A, Kinsella TL, Sturm BS, Peltier E, and Stagg-Williams SM. November 6, 2013. “Mining municipal wastewater for fertilizers and catalysts after crude oil extraction.” *American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA.

Sturm BSM, Roberts GW, Chen G, Wolfe T, and Stagg-Williams SM. November 6, 2013. “The relationship between growth phase, macromolecular content, and biocrude yield for *Chlorella kessleri*.” *American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA.

Yasarer LW, Sturm BSM, White SS. October, 31 2013. "Confronting Climate Change in Kansas Reservoir Management: Perspectives and Opportunities." *North American Lake Management Society 33rd International Symposium*, San Diego, California.

Yasarer LW, Sturm BSM, Sinnathamby S, White SS. October 7, 2013. "Exploring Climate Change in Kansas Watersheds through Hydrologic Modeling and Social Surveys." *Kansas*

- NSF EPSCoR Conference*, Lawrence, Kansas.
- Witthaus L, Sturm BSM, White SS. August, 26 2013. "A Survey of Perspectives on Climate Change and Kansas Water Management." Presented to the Kansas Water Office, Topeka, Kansas.
- Fortier M-O, Roberts GW, Sturm BSM, and Stagg-Williams SM. June 19, 2013. "Life cycle assessment of bio-jet fuel from hydrothermal liquefaction of microalgae." *International Conference on Algal Biomass, Biofuels and Bioproducts*, Toronto, Canada.
- Gentry J, Metz B, Sturm B, and Herlihy P. May 20-22, 2013 "Community-Based Participatory Approaches for Addressing the Social, Environmental and Cultural Challenges of Development." *2013 World Environmental & Water Resources Congress*, Cincinnati, Ohio.
- Fortier M-O, Roberts GW, Sturm BSM, and Stagg-Williams SM. November 1, 2012. "Life cycle assessment of bio-jet fuel from hydrothermal liquefaction of microalgae." *American Institute of Chemical Engineers Annual Meeting*, Pittsburgh, PA.
- Roberts GW, Fortier M-O, Sturm BSM, and Stagg-Williams SM. November 1, 2012. "Thermochemical conversion to biocrude from pilot scale wastewater fed algae." *American Institute of Chemical Engineers Annual Meeting*, Pittsburgh, PA.
- Fortier M-O and Sturm BSM. October 2, 2012. "Geographic Analysis of Algae Production for Biofuels at Kansas Wastewater Treatment Plants." *Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, New Orleans, LA.
- Roberts GW, Fortier M-O, Sturm BSM, Stagg-Williams SM. August 19-23, 2012. "Bio-crude from pilot wastewater fed algal systems." *Fall 2012 ACS National Meeting*, Philadelphia, PA.
- Fortier M-O and Sturm BSM. June 13, 2012. "Initial life cycle assessment results for bio-jet fuel from algal feedstocks." *International Conference on Algal Biomass, Biofuels and Bioproducts*, San Diego, CA.
- Fortier M-O and Sturm BSM. June 13, 2012. "Fate of algal lipids during solar and passive drying." *International Conference on Algal Biomass, Biofuels and Bioproducts*, San Diego, CA.
- Stagg-Williams SM, Roberts G, and Sturm B. April 16-19, 2012. "Wastewater-fed algae: hydrothermal liquefaction to biocrude." *International Biomass Conference*, Denver, CO.
- Bergsven L, Sturm B, Durar A, and Dickinson G. October 19, 2011. "After over a decade of foaming, the development of a statistical model combined with traditional microscopy provides operating guidelines." *Water Environment Federation Technical Engineering Conference*, Los Angeles, CA.
- Fortier M-O and Sturm BSM. October 18, 2011. "Initial life cycle assessment results for bio-jet fuel from algal feedstocks." *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN.
- Coiner R and Sturm BSM. October 18, 2011. "Milking lipids from green alga: feasibility of using biocompatible solvents to extract lipids from living cells." *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN.
- Sturm BSM, Smith VH, Fortier MO, Peltier E, and deNoyelles F. October 17, 2011. "Controls of microalgal biomass and lipid production in municipal wastewater-fed bioreactors." *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN.
- Gentry J, Sturm B and AT Peterson. September 27 – October 1, 2011. "Impacto del Cambio Climático en la Transmisión de Ascaris lumbricoides (Impact of a Changing Climate on Transmission of Ascaris lumbricoides)." *XX Congreso Latinoamericano de*

- Parasitología/XV Congreso Colombiano de Parasitología y Medicina Tropical*,
Universidad de Los Andes, Bogotá, Colombia.
- Sturm BSM and Lamer SL. August 30-September 1, 2011. "An energy evaluation of coupling nutrient removal from wastewater with algal biomass production." *Kansas Water Environment Association Annual Conference*, Topeka, KS.
- Witthaus L, Carney E, Smith V, and Sturm B. August 10-11, 2011. "Integrative approach for forecasting water quality and quantity within the framework of climate and land-use change in Kansas." *Great Plains Bioassessment Symposium*, Lawrence, KS.
- Lamer SL and Sturm BSM. July 31-August 3, 2011. "An energy evaluation of coupling nutrient removal from wastewater with algal biomass production." *Water Environment Federation Energy and Water Specialty Conference*, Chicago, IL.
- Sturm BSM. July 10-12, 2011. "Developing critical reading and writing skills in a biological principles class." *Association of Environmental Engineering and Science Professors Education and Research Conference*, Tampa, FL.
- Chen X, Peltier E, and Sturm B. May 22-26, 2011. "Denitrification in a Field Bioretention System." *World Environmental and Water Resources Congress*, Palm Springs, CA.
- Witthaus L, Smith V, Sturm B, Carney E, and Dermeyer R. April 18-20, 2011. "Integrative approach for forecasting water quality and quantity within the framework of climate and land-use change in Kansas." *American Water Resources Association Specialty Conference*, Baltimore, Maryland.
- Peltier E and Sturm B. March 27-31, 2011. "Analytical methods for detecting contaminants of emerging concern in the natural and built environment." *American Chemical Society*, Anaheim, CA.
- Sturm BSM, Yang C, Lane RF, Adams CA, and Carter RE. March 27-31, 2011. "Impact of sludge residence time on the relative biodegradation and biosorption of sulfonamide antibiotics in activated sludge." *American Chemical Society*, Anaheim, CA.
- Sturm BSM, Hiatt M, and Smith VH. March 27-31, 2011. "Relationship between N:P and CO₂ supply and algal lipid production." *American Chemical Society*, Anaheim, CA.
- Sturm BSM, Smith VH, and deNoyelles FJ. November 7-12, 2010. "Application of top-down ecological control principles to maximize algal productivity in open pond systems." *American Institute of Chemical Engineers Annual Meeting*, Salt Lake City, UT.
- Antezana MD, Stagg-Williams SM, Sturm BS, Moore DS, and Shinogle HE. November 7-12, 2010. "Solvent Extraction of Lipids from Microalgae by Application of Pulsed Electric Field (PEF): Is it Feasible?." *American Institute of Chemical Engineers Annual Meeting*, Salt Lake City, UT.
- Sturm BSM, Smith VH, Williams S, and deNoyelles F. 27-30 October 2010. "Pilot studies of algal lipid production in wastewater-fed systems." *45th Midwest Regional Meeting, American Chemical Society*, Wichita, KS.
- Sturm BSM, Smith VH and deNoyelles F. 30 Aug-2 Sept, 2010. "Coupling nutrient removal with algal oil production." *2nd Joint KWEA & KsAWWA Conference*, Topeka, Kansas.
- Sturm BSM, Smith VH and deNoyelles F. Feb 3, 2010. "The promise of coupling nutrient removal from wastewater with algal oil production – preliminary results of a pilot study." *60th Environmental Engineering Conference: Designing for Sustainability*, Lawrence, Kansas.

- McSwain Sturm BS and Irvine RL. April 7, 2008. "Dissolved oxygen as a key parameter to aerobic granule formation." *2008 4th IWA International Conference for Sequencing Batch Reactor Technology*, Rome, Italy.
- McSwain BS and Wuertz S. "The application of microbial source tracking in water quality monitoring for TMDL development." Feb 7, 2007. *57th Environmental Engineering Conference: Striving Toward Sustainability*, Lawrence, Kansas.
- McSwain BS, Irvine RL, and Wilderer PA. "Population dynamics during aerobic granule formation – lessons from denaturing gradient gel electrophoresis." 2004. *1st IWA Aerobic Granular Sludge Workshop*, Munich, Germany.
- McSwain BS, Irvine RL, and Wilderer PA. "The influence of settling time on the formation of aerobic granules and extracellular polymeric substances." 2004. *3rd IWA International Conference for Sequencing Batch Reactor Technology*, Noosa, Australia.
- McSwain BS, Irvine RL, and Wilderer PA. "The effect of intermittent feeding on aerobic granule structure." 2003. *IWA International Biofilm Symposium*, Cape Town, South Africa.
- Chiavola A, McSwain BS, Irvine RL, Boni MR, and Baciocchi R. 2002. "Biodegradation of 3-chlorophenol in a sequencing batch reactor." *3rd IWA International Conference for IWA Small Water and Wastewater Treatment Systems*, Istanbul, Turkey.

Poster Presentations

- Mosquera M, Finely A, De Clippeleir H, Murthy S, and Sturm B. March 19, 2018. "Toward a Kinetic Model - Determination of Apparent K_s Values for Varying Size Fractions of Aerobic Granular Sludge." *Granular Sludge Conference, IWA Biofilms Specialist Group*, Delft, the Netherlands.
- Earnhart D, Bengston B, Mardan Doost B, and Sturm B. November 15, 2016. "Analysis of minimum desirable streamflow restrictions in the lower republican river basin". *Governor's Conference on the Future of Water in Kansas*, Manhattan, Kansas.
- LaFollette M, Benson S, Grey A, Hadel J, Hable R, Alimoradi S, Stagg-Williams S, and Sturm B. November 14, 2016. "The effects of algae growth stage on biocrude characterization from hydrothermal liquefaction using *Chlorella kessleri* algae". *American Institute of Chemical Engineers*, San Francisco, CA.
- LaFollette M, White C, Petz A, Hable R, Stagg-Williams S, and Sturm, B. November 9, 2015. "A Study on the Effects of Reactor Size and Mixing Conditions during Hydrothermal Liquefaction of Wastewater Algae". *AIChE Annual Meeting*, Salt Lake City, Utah.
- Yasarer LW, Sturm BSM, White SS. October 7, 2013. "A Survey of Perspectives on Climate Change and Kansas Water Management" (Poster). *Kansas NSF EPSCoR Conference*, Lawrence, Kansas.
- Yasarer LW, Sturm BSM, White SS. October, 25 2013. "A Survey of Perspectives on Climate Change and Kansas Water Management" (Poster). *Governor's Conference on the Future of Water in Kansas*, Manhattan, Kansas.
- Mardan Doost B, Feddema J, Sturm BSM. October 25, 2013. "Developing a State-wide Daily Water Budget to Predict Irrigation Demand for a Changing Climate and Land-Use." (Poster) *Governor's Conference on the Future of Water in Kansas*, Manhattan, KS.
- Yasarer LW, Sturm BSM, Sinnathamby S, White SS. November 4-6 2013. "Exploring Climate Change in Kansas Watersheds through Hydrologic Modeling and Social Surveys" (Poster). *National NSF EPSCoR Conference*, Nashville, Tennessee.

- Rocha A, Roberts GW, Kinsella TL, Fortier M-O, Sturm B, and Stagg-Williams SM. November 6, 2013. "Pyrolysis decomposition analysis of wastewater derived microalgae via TGA-FTIR." (Poster) *American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA.
- Hamdeh UH, Roberts GW, Fortier M-O, Sturm BSM, Carrier DJ, and Stagg-Williams. November 6, 2013. "Comparing Hydrothermal Liquefaction of Algae Cultivated in Different Municipal Wastewater" (Poster). *American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA.
- Benson TJ, Roberts GW, Fortier M-O, Stagg-Williams SM, Sturm B, and Raza H. November 6, 2013. "Aspen Simulation for the Hydrothermal Liquefaction of Algae to Generate Fuels and Chemicals" (Poster).
- Fortier M-O, Roberts GW, Sturm BSM, and Stagg-Williams SM. July 16, 2013. "Life cycle assessment of bio-jet fuel from hydrothermal liquefaction of microalgae" (Poster). *Association of Environmental Engineering & Science Professors (AEESP) 50th Anniversary Conference*, Golden, CO.
- Gentry J, Metz B, and Sturm B. July 16, 2013. "Health & environment through a cultural lens: a multidisciplinary approach for increasing project sustainability among the Ch'orti' Maya in eastern Guatemala" (Poster). *Association of Environmental Engineering & Science Professors (AEESP) 50th Anniversary Conference*, Golden, CO.
- Witthaus L, Sturm BSM, White SS. July 16, 2013. "A Survey of Perspectives on Climate Change and Kansas Water Management" (Poster). *Association of Environmental Engineering & Science Professors (AEESP) 50th Anniversary Conference*, Golden, CO.
- Witthaus L, Brunzell N, Douglas-Mankin K, Sinnathamby S, Sturm BSM. October 31, 2012. "Using predictive modeling tools to better understand water quality impacts from extreme precipitation events." (Poster) *Governor's Conference on the Future of Water in Kansas*, Manhattan, KS.
- Roberts GW, Fortier M-O, Sturm BSM, Stagg-Williams SM. July 10-11, 2012. "Biocrude production from pilot scale wastewater grown algae" (Poster). *U.S. Department of Energy Biomass 2012: Confronting Challenges, Creating Opportunities*, Washington D.C.
- Roberts GW, Sturm BSM, Stagg-Williams SM. June 13, 2012. "Hydrothermal Liquefaction of Wastewater Fed Algae to Bio-crude" (Poster). *International Conference on Algal Biomass, Biofuels and Bioproducts*, San Diego, CA.
- Fortier M-O and Sturm BSM. June 10-13, 2012. "Implications and potential for urban vs. rural collocation of algal production and wastewater treatment" (Poster). *International Conference on Algal Biomass, Biofuels and Bioproducts*, San Diego, CA.
- Fortier M-O and Sturm BSM. April 16-17, 2012. "Implications and potential for urban vs. rural collocation of algal production and wastewater treatment" (Poster). *International Biomass Conference*, Denver, CO.
- Wooldridge C and Sturm BSM. October 19-21, 2011. "Closing the Waste to Energy Loop – Viability of Using Waste Glycerine as a Carbon Source for Algal Feedstock Production" (Poster). *American Chemical Society, 46th Midwest, 39th Great Lakes Joint Regional ACS Meeting*, St. Louis, MO.
- Roberts GW, Walker K, Fortier M-O, Sturm B, and Stagg-Williams SM. October 19, 2011. "Feedstock-to-Tailpipe: algae to liquid fuels" (Poster). *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN.

- Laurence H, Pavlicek N, Kittler CL, Williams SM, Peltier E, and Sturm BSM. October 18, 2011. “A novel use for waste algal biomass after lipid extraction” (Poster). *American Institute of Chemical Engineers Annual Meeting*, Minneapolis, MN.
- Witthaus L, Carney E, Smith V, and Sturm B. November 3-5, 2010. “Validation and calibration of the EUTROMOD model for Kansas reservoirs” (Poster). *North American Lake Management Society 30th International Symposium: The water cycle – managing the challenges in water resources*, Oklahoma City, Oklahoma.
- Gentry J, Harry K, Dill K, Luebbering S, Mihalevich A, Owens P, Schweppe D, Thompson T, Valdivia A, and Sturm B. October 25-26, 2010. “Application of Geographic Information Systems and Global Positioning Systems for Implementing and Managing a Water and Sanitation Project in Patanatic, Guatemala” (Poster). *Water and Health: Where Science Meets Policy*, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
- Witthaus L, Carney E, Smith V, and Sturm B. October 8-9, 2010. “Validation and calibration of the EUTROMOD model for Kansas reservoirs” (Poster). *Association of American Geographers’ Great Plains-Rocky Mountain Division Annual Conference*, Lawrence, KS.
- Witthaus L, Carney E, Smith V, and Sturm B. October 4, 2010. “Validation and calibration of the EUTROMOD model for Kansas reservoirs” (Poster). *Kansas NSF EPSCoR Statewide Conference: Energy, climate and the future – the role of Kansas*, Topeka, KS.
- Witthaus L, Carney E, Smith V, and Sturm B. September 13-16, 2010. “Validation and calibration of the EUTROMOD model for Kansas reservoirs” (Poster). *PhD Students and Young Scientists Conference: Young scientists towards the challenges of modern technology*, Warsaw, Poland.
- Bellassai E and McSwain Sturm BS. “Correlating a reactor’s microbial diversity to its performance stability” (Poster). April 7, 2008. *4th IWA International Conference for Sequencing Batch Reactor Technology*, Rome, Italy.
- McSwain BS, Nancharaiyah YV, Mohan SV, Hausner M, Wilderer PA, and Irvine RL. 2002. “Monitoring the conjugal transfer of plasmid pWWO from *Pseudomonas putida* in a sequencing batch biofilm reactor for bioaugmentation purposes” (Poster). *NIEHS Conference for Bioremediation and Biodegradation: Current Advances in Reducing Toxicity, Exposure and Environmental Consequences*, Pacific Grove, California.
- McSwain BS, Irvine RL, Dassanayake CY, Irvine DA, and Earley JP. 2001. “A comparative evaluation of population dynamics in a sequencing batch reactor (SBR), and two conventional continuous flow systems” (Poster). *3rd IWA International Conference for Microorganisms in Activated Sludge and Biofilm Processes*, Rome, Italy.

GRANTS:

External Grants

- “Water Sustainability and Resource Recovery Consortium,” 08/01/2017 – current, City of Lawrence (\$25,000 annually; \$33,000 to date). Principal Investigator.
- “WERF: Determining the fate and major removal mechanisms of microplastics in water and resource recovery facilities,” 08/01/2017 – 07/31/2020, National Science Foundation (\$304,892). Principal Investigator.
- “RII Track-1: Microbiomes of Aquatic, Plant and Soil Systems (MAPS) mediating sustainability: An observational and experimental network across Kansas,” 06/01/2017 – 05/31/2022, National Science Foundation (\$20,000,000). Senior personnel with K Bowman-James, PI.
- “RII Track-2 FEC: Improving water management, treatment and recovery in oil and gas

- production,” 08/01/2016 – 07/31/2020, National Science Foundation (\$3,898,637). Co-investigator with E Peltier, PI.
- “Fate of sulfonamide antibiotics through biological treatment in WRRFs designed to maximize reuse applications,” 09/01/2016 – 02/28/2018, WateReuse Research Foundation (\$84,000, with \$84,000 hard-dollar matching, and \$443,645 in-kind matching). Co-investigator with S Sathyamoorthy, PI.
- “GOALI - Balancing Floccs and Granules for Activated Sludge Process Intensification: Stoke's vs Fick's Laws,” 07/01/2015 – 06/30/2018, National Science Foundation (\$330,061). Principal Investigator.
- “Balancing floccs and granules for activated sludge process intensification in plug flow configurations,” 04/01/2015 – 03/31/2017, Water Environment Research Foundation (\$118,926, with \$130,000 hard-dollar matching, and \$1,621,672 in-kind matching). Principal Investigator.
- “Developing granular/floccular hybrid systems for activated sludge intensification,” 03/16/2015 – 03/15/2019, District of Columbia Water & Sewer Authority (\$260,000). Principal Investigator.
- “Hydroxyapatite formation during hydrothermal liquefaction of algae: synthesis and catalytic implications,” 08/01/2014 – 07/31/2017, National Science Foundation (\$409,653). Co-PI with SM Stagg-Williams, PI.
- “Aerobic granular sludge,” 07/01/2014 – 12/31/2015, Black & Veatch Engineering (\$20,000). Principal Investigator.
- “EPSCoR Supplement: Sturm (KU),” 10/0/2014 – 12/31/2015, National Science Foundation (\$164,298). Principal Investigator.
- “Microcosm/Bench-scale studies at Fort Riley, Kansas,” 09/22/2014 – 09/21/2015, US Army Corps of Engineers (\$76,530). Co-PI with J. Roberts and L. Krishtalka, PI.
- “Asian Carp Distribution Study Using Environmental DNA (eDNA),” 9/20/2012 – 7/12/2015, US Fish & Wildlife Service #F12AP01204 (\$29,996). Co-investigator with D. Huggins, PI, D. Baker, and M. Grose.
- “REU: Biofuels development – feedstock to tailpipe,” 09/15/2011 – 08/31/2015, National Science Foundation Grant # EEC-1063097 (\$358,531). Co-investigator with R. Ostermann, PI, and S. Williams.
- “EPSCoR Phase VI: Climate change and energy: basic science, impacts, and mitigation - Farmers’ Decisions to Grow Crops for Fuel,” 10/01/2009 – 08/31/2015, National Science Foundation Grant # EPS-0903806 (\$3,369,867). Co-investigator with D. Earnhart, PI, C. Brown, S. Egbert, J. Feddema, J. Gibson-Carpenter, E. Hanley, J. Nagel, S. White, J. Peterson, J. Bergtold, and L. Kulcsar.
- “EPSCoR Phase VI: Climate change and energy: basic science, impacts, and mitigation – Subaward for Solar Energy Capture for Algal Oil Production,” 10/01/2009 – 09/30/2014, National Science Foundation Grant # EPS-0903806 (\$140,000). Principal investigator for sub-award.
- “Environmental DNA (eDNA) sampling as a non-invasive monitoring tool for threatened and endangered species: Experimental studies using Topeka shiners (*Notropis topeka*),” 10/10/2012 – 5/31/2014, Kansas Department of Wildlife Parks & Tourism (\$46,576). Co-investigator with D. Huggins, PI, D. Baker, F. deNoyelles, and M. Grose.
- “Feedstock to tailpipe initiative: Kansas biofuels production, testing and certification laboratory,” 01/01/2010 – 12/31/2013, Department of Energy Award # EE-0000408

- (\$1,236,950). Co-investigator with S. Williams, PI, and C. Depcik.
- “RET: Shaping inquiry from feedstock to tailpipe (SHIFT),” 09/01/2009 – 08/31/2013, National Science Foundation Grant # EEC-0909100 (\$499,477). Co-investigator with S. Williams, PI, L. Blair, C. Bode, C. Depcik, D. Lane, V. Smith, A. Scurto, L. Weatherley, N. Brunzell, S. Billings, and E. Peltier.
- “Feasibility of renewable feedstocks for production of bio-jet fuel,” 01/01/2011 – 6/31/2013, National Aeronautics and Space Administration Grant #NNX07AO27A, Subaward #SUB3138-17 and Kansas Technology Enterprise Corporation (\$468,561). Principal investigator with co-investigators S. Williams, E. Peltier, and R. Taghavi.
- “KU Biofuels Feedstock to Tailpipe Initiative,” 10/01/2008 – 5/15/2013, US Department of Transportation Grant # DT0S59-06-G-00047, Kansas University Transportation Research Institute (\$845,714). Co-investigator with S. Williams, PI, F. deNoyelles, C. Depcik, V. Smith, A. Scurto, L. Weatherley, N. Brunzell, S. Billings, and E. Peltier.
- “Food vs. Fuel: Kansas farmer’s decisions to grow crops for transport fuels,” 8/2009 - 8/2010, US Department of Transportation Grant # DT0S59-06-G-00047, Kansas University Transportation Research Institute (\$153,392). Co-investigator with D. Earnhart, PI, C. Brown, J. Feddema, J. Gibson-Carpenter, E. Hanley, and S. White.
- “Feasibility of biological production of hydrogen from wastewater by a two-stage fermentation process,” 8/2007 - 8/2008, US Department of Transportation Grant # DT0S59-06-G-00047, Kansas University Transportation Research Institute (\$54,954). Principal investigator.
- “Fate of pathogens in transportation runoff and stormwater collection systems,” 8/2007 - 7/2008, US Department of Transportation Grant # DT0S59-06-G-00047, Kansas University Transportation Research Institute (\$53,662). Principal investigator.
- Black & Veatch gift to support wastewater treatment research, 3/2007 - 3/2008, Black & Veatch Engineering firm, Kansas City, MO (\$25,000). Principal investigator.

Internal Grants

- “Creating a Center for Metagenomic Microbial Community Analysis,” 3/01/2014 – 8/31/2017, University of Kansas Provost’s Strategic Initiative Grant, Level One (\$299,925). Principal investigator with S. Billings, S. MacDonald, J. Roberts, and B. Sikes.
- “Sustainable Hydrocarbon Recovery in Unconventional Reservoirs,” 3/01/2014 – 2/28/2016, University of Kansas Provost’s Strategic Initiative Grant, Level One (\$299,000). Co-investigator with J-T. Liang, PI, C. Berkland, R. Barati, J-S. Tsau, S. Johnson, T. Peltier, and K. Peltier.
- “Combining engineering, public health, anthropological, geographic, and film knowledge for sustainable development among the Ch’orti’ Maya of Guatemala,” 5/10/2013 – 6/09/2014, University of Kansas Commons (\$25,000). Co-investigator with B. Metz, PI, A. Viera, J. Gentry, and A. Mladenov.
- “Social and environmental determinants of health for the Ch’orti’ Maya,” 05/01/2012 – 04/31/2013, Latin Americanist Research Cluster Award, University of Kansas (\$5,000). Co-investigator with B. Metz, PI, P. Herlihy, and J. Gentry.
- “Distinguishing the influence of ammonia oxidizing bacteria or abiotic reactors in the degradation of synthetic estrogens (EE2),” 7/2009 - 6/2010, University of Kansas General Research Fund #2301215 (\$6,890). Principal investigator.
- “A pilot project: maximizing the lipid content of algal growth for downstream biodiesel production,” 7/2008 - 6/2009, University of Kansas General Research Fund #2301326

(\$8,116). Principal investigator.

“Investigating the impact of sludge residence times on microbial diversity and reactor stability under stressed conditions,” 4/2007 - 4/2009, University of Kansas General Research Fund (\$7,887). Principal investigator.

TEACHING

Courses Taught

CE 477	Introduction to Environmental Engineering
CE 573/773	Biological Principles of Environmental Engineering Processes
CE 871	Fundamentals of Bioremediation
CE 876	Wastewater Treatment Plant Design
CE 495/895	Life Cycle Assessment
ENVR 702	Energy, Ecology & Community in Kansas

Doctoral Students Advised

1. Omolola Odunola, Environmental Engineering, January 2018, Current.
2. Sirwan Alimoradi, Environmental Engineering, began August 2015, Current.
3. Rasha Faraj, Environmental Engineering, began January 2015, Current.
4. Abdullah Ibrahim, Environmental Engineering, began January 2014, Current. Co-advised with Dr. Edward Peltier.
5. Mariela Mosquera, Environmental Science, January 2016 – May 2018. Incomplete.
6. Jodi Gentry, Environmental Engineering, began January 2010 – 2014. Incomplete.
7. Bob Everhart, Environmental Engineering, January 2010 – December 2015.
8. Lindsey Witthaus Yasarer, Environmental Science, January 2010 – August 2015.
9. Marie-Odile Fortier, Environmental Engineering, January 2011 – August 2015.

Masters Students Advised

1. Mai Bui, Environmental Engineering, Current.
2. Andrew Hummel, Environmental Engineering, Current.
3. Jennifer Warren, Environmental Engineering, Current.
4. John Handley, Environmental Engineering, Current.
5. Tyler Mayo, Environmental Engineering, Current.
6. Cordell Viehweg, Environmental Science, May 2018.
7. Shashi Khambampati, Environmental Engineering, completed coursework May 2017.
8. Theresa Amante, Environmental Engineering, December 2017.
9. Samruddhi Vinayak, Environmental Engineering, August 2017.
10. Rachel Swezy, Environmental Engineering, May 2016.
11. Matthew Herynk, Environmental Science, December 2015.
12. Ammar Al Zarjawi, Environmental Engineering, May 2017.
13. Rasha Faraj, Environmental Engineering, May 2014.
14. Babak Mardan Doost, Environmental Engineering, May 2015.
15. Roopa Matole, Environmental Engineering, December 2014.
16. Christine Polo, Environmental Engineering, December 2014.
17. Richard Gui, Environmental Science, December 2014.
18. Guo (Sarah) Chen, Environmental Engineering, December 2013.
19. Jaci Ferguson, Environmental Engineering, December 2013.

20. Jennifer Raney, Environmental Science, December 2012.
21. Lindsey Witthaus, Environmental Science, May 2012.
22. Ryan Coiner, Bioengineering, December 2011.
23. Stacey Lamer, Environmental Engineering, May 2011.
24. Reuben Dermeyer, Civil Engineering (Water Resources), August 2011.
25. Lindsey Bergsven, Environmental Engineering, December 2010.
26. Mauricio Antezana, Chemical Engineering, May 2011.
27. Jason Koontz, Environmental Science, August 2010.
28. Gustavo Queiroz, Environmental Engineering, May 2010.
29. Pat Owens, Environmental Science, August 2009.
30. Xi Chen, Environmental Science, August 2009.
31. Erin Bellassai, Environmental Engineering, May 2009.
32. Maritza Yanez Navarrete, Environmental Science, May 2009.
33. Jeff Barnard, Civil Engineering, December 2008.
34. Wen Zhang, Environmental Engineering, August 2008.
35. Chris Finn, Environmental Engineering, May 2007.
36. Lu Yi, November 2003.

Undergraduate Student Research Advised

1. Anna Barreda, B.S., Civil Engineering, environmental emphasis, May 2018 – current.
2. Edward Darbro, B.S., Civil Engineering, environmental emphasis, May 2018 – current.
3. Sydney Gard, B.S., Civil Engineering, environmental emphasis, December 2017 – current.
4. Adrian Romero, B.S., Chemical Engineering, January 2018 – current.
5. Juan Pablo Ramirez Mantilla, B.S., Mechanical Engineering, August 2017 – current.
6. Hannah Stohr, B.S., Chemical Engineering, environmental emphasis, August 2017 – current.
7. Abigail Bradshaw, B.S., Civil Engineering, environmental emphasis, December 2017 – May 2018.
8. Sam Nixon, B.S., Civil Engineering, environmental emphasis, December 2017 – May 2018.
9. Andrew Finley, B.S., Chemical Engineering, environmental emphasis, May – December 2017.
10. Colton Kenner, B.S., Civil Engineering, environmental emphasis, August 2016 – May 2017.
11. Miranda Mendiola, B.S., Chemical Engineering, January 2016 – August 2016.
12. Russell Epperson, B.S., Chemical Engineering, Summer 2015 – May 2016.
13. Rogelio Preschard, B.S., Civil Engineering, environmental emphasis, January 2016 – May 2017.
14. Jennifer Warren, B.S., Civil Engineering, environmental emphasis, August 2015 – May 2017.
15. Savannah Probasco, B.S., Chemical Engineering, August – December 2015.
16. Ryan Magner, B.S., Chemical Engineering, Summer 2015.
17. William O'Fill, B.S., Chemical Engineering, Summer 2015.
18. Abigail Perkins, B.S., Chemical Engineering, January 2015 – current.
19. Kyle Harrigan, B.S., Chemical Engineering, August 2014 – May 2015.
20. David Tyndall, B.S., Environmental Science, Haskell Indian Nations University, October 2014 – May 2016.
21. Theresa Amante, B.S., Civil Engineering, environmental emphasis, February 2014 – August 2015.
22. Brett Wagner, B.S., Civil Engineering, environmental emphasis, August 2012 – May 2016.
National Science Foundation Graduate Research Fellowship recipient (2016).
23. Emily Cook, B.S., Civil Engineering with environmental emphasis, August 2012 – May 2015.
24. Malcolm Squire, B.S., University of Minnesota, Summer 2014.

25. Katie Legenski, B.S., Chemical Engineering, Pennsylvania State University, Summer 2014.
26. Luigi Basalo, B.S., Civil Engineering, environmental emphasis, May 2012 – December 2013.
27. Emanuel Di Stasio, B.S., Mechanical Engineering, Loyola Marymount University, Summer 2013.
28. Daniel Calzadilla, B.S., Chemical Engineering, SUNY-Buffalo, Summer 2013.
29. Corinne Finley, B.S., Chemical Engineering, University of Maine, Summer 2012.
30. Cody Siroka, B.S., Chemical Engineering, University of Massachusetts - Amherst, Summer 2012.
31. Elizabeth Murray, B.S., Chemical Engineering, Columbia University, Summer 2012.
32. Matt Crawford, B.S., Engineering Physics, University Kansas, Summer 2012.
33. Alex Keeling, B.S., Chemical Engineering, Syracuse University, Summer 2012.
34. Cale Mages, B.S., Civil Engineering with environmental emphasis, May 2012 - August 2012.
35. Alahmadi, Mala, B.S., Civil Engineering, September 2011 – December 2011.
36. Quent Cole, B.S., Civil, Civil Engineering with environmental emphasis, June 2011 – June 2012.
37. Chloe Wooldridge, B.S., Civil Engineering with environmental emphasis, November 2010 – May 2012. National Science Foundation Graduate Research Fellowship recipient (2013).
38. Brent Gerard, B.S., Civil Engineering, September 2010 – December 2010.
39. Brandon Westemeyer, B.S., Chemical Engineering, May 2010 – August 2010.
40. Amanda Roden, B.S., Chemical Engineering, August 2009 – December 2010.
41. John Sullivan, B.S., Chemical Engineering, August 2009 – August 2010.
42. Vinur Kaul, B.S., Civil Engineering, August 2009 – May 2010.
43. Daniel Klapper, B.S., Chemical Engineering, May 2009 – May 2010.
44. Matt Hiatt, B.S., Civil Engineering with environmental emphasis, May 2009 – May 2011. National Science Foundation Graduate Research Fellowship recipient (2012).
45. Ryan Coiner, B.S., Chemical Engineering, January 2009 – May 2010.
46. Amanda Green, B.S., Civil Engineering, December 2007 – August 2010.
47. Gillian Johnston, B.S., Biology, March 2009 – August 2009.
48. Jonathon Holmes, B.S., Chemical Engineering, August 2008 – June 2009
49. Joe Day, B.S., Chemical Engineering, May 2008 – October 2008.
50. Seth Motes, B.S., Chemical Engineering, March 2008 – December 2009.
51. Nicole Carroll, B.S., Civil Engineering, September 2007 -May 2008.

COMMUNITY AND UNIVERSITY SERVICE

University of Kansas

- Alcohol Sales Policy Review Committee, Member (2017 - 2018)
- Ad-hoc Insurance Review Committee, Member (2017)
- University Faculty Senate, Member (2015 - 2018)
- University Faculty Senate Research committee, Member (2013 - 2016)
- Center for Teaching Excellence, Departmental Ambassador (2008 - 2016)
- National Science Foundation, Innovations in Food Energy & Water Design Workshop, Organizing committee member (2015 - 2016)
- University Sabbatical Leave committee, Member (2013 - 2015)
- Big 12 Universities Water Workshop, Leader of the Nutrients and Trace Contaminants Workshop, Task Force Chair (Fall 2014)
- Aquatic Ecology faculty search committee, KBS/CLAS, Member (Fall 2013 - Spring 2015)
- Vice Chancellor for Research Search Committee, Member (Spring 2014 - Fall 2014)
- KU Water Research Planning committee, Member (2013 - 2014)
- Fulbright Scholars evaluation and interview committee, Member (2012 - 2014)

Center for Research on Global Change, C-Change project, Faculty Advisor. (2007 - 2014)
McNair Scholars Program, Mentor (Spring 2014 - Summer 2014)
Center for Teaching Excellence Peer Triad member, Member (Spring 2014)
Water Research Workshop, Organizer (September 13, 2013)
Center for Teaching Excellence GTA workshop, Presenter (2008, 2012, 2014)
Sustainability Curriculum & Research committee, Member (2010 - 2012)
“Water Initiative” for the University Strategic Planning process, Co-Author (2011)
KU Teaching Summit, Presenter (2010)
Sustainability in Education Group, KU Sustainability Master Plan, Member (2008 - 2010)
University Graduate Teaching Award, Reviewer (2008)
Best Practices Institute, Center for Teaching Excellence, Fellow (2007 - 2008)
Midwestern Association of Graduate Schools, Thesis reviewer (2007)

School of Engineering

School of Engineering Academic Standards Committee (2016 – Current)
LEEP2 Building Analytical Core Lab Committee, Member (2012 - 2015)
LEEP2 Building Unit Ops/ Environmental Teaching Lab Committee, Member (2012 - 2015)
Graduate Engineering Association Presentation Competition, Judge (April 10, 2014)
NIST Building Committee, Member (2009 - 2013)
Water Theme Leader, Strategic Planning Committee, Leader (2010 - 2012)
SOE Annual Teaching Workshop, Presenter (2010)
Engineer Your Career Outreach Program, Presenter (2009 - 2010)
Dept of Chemical & Petroleum Engr Undergraduate Research Presentations, Judge (2009)
Mechanical Engineering Senior Design Team, Advisor (2008 - 2009)
Society of Women Engineering Weekend Camps, Presenter (2007 - 2009)
Graduate Research Poster Competition, Judge (2008)
Environmental engineering laboratories, Design Director (2006 - 2007)

Department of Civil, Environmental & Architectural Engineering

Chair Five Year Review committee, Member (2018)
Environmental Engineering Faculty Search committee, Member (2017 - Current)
Curriculum committee, Member (2013 - Current)
Association of Water and Environment, Faculty Advisor (2011 - Current)
Environmental Science and Engr annual student poster competition, Coordinator (2011 – 2015)
Scholarship committee, Member (2011 - Current)
Environmental engineering laboratory safety, Coordinator (Fall 2008 - Current)
KU Environmental Engineering Conference Organizing Committee (2007 - Current)
Transportation faculty search committee. Member (2013 - 2014)
Website Development, Member (2013 - 2014)
Environmental Engineering and Science seminar, Organizer (2011 - 2012)
CEAE Chair Search Committee, Member (2007 - 2008)
ABET Assessment Planning Committee, Member (2006)