Candidate for Councilor

Jade B. Mitchell, PhD

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Associate Professor, Department of Biosystems Engineering
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A. Professional Preparation

Institution	Location	Major/Department	Degree & Year
University of Pittsburgh	Pittsburgh, PA	Civil and Environmental Engineering	B.S., 1997
Drexel University	Philadelphia, PA	Civil Engineering	M.S., 2007
Drexel University	Philadelphia, PA	Environmental Engineering	Ph.D., 2010
U.S. EPA	Research Triangle Park, NC	National Exposure Research Laboratory	Post-Doctoral Fellow, 2010-2012

B. Appointments

2022-present Associate Chair, Biosystems and Agricultural Engineering (BAE), Michigan State University (MSU), East Lansing, MI
2018-present Associate Professor, Department of Biosystems and Agricultural Engineering, Michigan State University, East Lansing, MI
2012-2018 Assistant Professor, Department of Biosystems and Agricultural Engineering, Michigan State University, East Lansing, MI
2012 Risk Analyst, U. S. Department of Agriculture, Food Safety Inspection Service, Washington, DC
2010-2012 Postdoctoral Fellow/Research Scientist, U.S. Environmental Protection Agency (EPA), Office of Research and Development (ORD), National Exposure Research Laboratory (NERL),Research Triangle Park, NC
2002-2005 Engineer - McMahon Associates, Fort Washington, PA,
2000-2002 Highway Designer, McCormick Taylor & Associates, Philadelphia, PA

2000 Assistant Project Manager, Bovis Lend Lease, Bethesda, MD,
1998-2000 Project Engineer, Tompkins Builders/J.A. Jones Co., Washington, DC

C. Publications *Selected (Most Recent of 56 total peer reviewed)*

1. I. Kropp, A. P. Nejadhashemi, R. Julien, **J. Mitchell**, A. J. Whelton. "A Machine Learning Framework for Predicting Downstream Water End-use Events with Upstream Sensors" *Water Supply* (2022) in press
2. M. A. Palmegiani, A. J. Whelton, **J. Mitchell**, A. P. Nejadhashemi, and J. Lee. "New Developments in Premise Plumbing: Integrative Hydraulic and Water Quality Modeling" *AWWA Water Science* (2022) e1280 (DOI: 10.1002/aws2.1280)
3. D. D. Wu, **J. Mitchell***, and J. Lambert. "Global Systemic Risk and Resilience for Novel Coronavirus and COVID-19 in the Post-Pandemic Era" Risk Analysis (2022) 42:1-4 (http://dx.doi.org/10.1111/risa.13873)
4. R. Julien, B. Saravi, A. Nejadhashemi, A. J. Whelton, T. G. Aw, and **J. Mitchell***. "Identifying water quality variables most strongly influencing Legionella concentrations in building plumbing" *AWWA Water Science* (2022) e1267 (DOI: /10.1002/aws2.1267)
5. K. Dean and **J. Mitchell***. "Identifying water quality and environmental factors that influence indicator and pathogen decay in natural surface waters" *Water Research* (2022) 211:e118051 (https://doi.org/10.1016/j.watres.2022.118051)
6. A. Kline, K. Dean, A. L. Kossik, J. Ciol Harrison, J. D. Januch, N. K. Beck, N. A. Zhou, J. H. Shirai, D. S. Boyle, **J. Mitchell**, and J. Scott Meschke. "Persistence of poliovirus types 2 and 3 in waste-impacted water and sediment" *PLoS ONE* (2022)17(1): e0262761 (https://doi.org/10.1371/journal.pone.0262761)
7. J. B. Morrow, A. Packman, K. Martinez, K. Van Den Wymelenberg, D. M. Goeres, D. Farmer, **J. Mitchell**, L. Ng, Y. Hazi, M. Schoch-Spana, S. C. Quinn, B. Bahnfleft, P. Olsiewski. "Critical Capability Needs for Reduction of Transmission of SARS-CoV-2 Indoors " *Frontiers in Bioengineering and Biotechnology* (2021) 9 (https://doi.org/10.3389/fbioe.2021.641599)
8. D. D. Wu, **J. Mitchell**, and J. Lambert. "Global Systemic Risk and Resilience for Novel Coronavirus and COVID-19" *Risk Analysis* (2021) 41(5):701-704 (https://doi.org/10.1111/risa.13746)
9. X. Guo, S. Akram, R. Stedtfeld, M. Johnson, A. Chabrelie[1], D. Yin, and **J. Mitchell***. "Distribution of antimicrobial resistance across the overall environment of dairy farms–A case study." *Science of The Total Environment* (2021)788: 147489. (https://doi-org.proxy1.cl.msu.edu/10.1016/j.scitotenv.2021.147489)
10. K. Dean, S. Tamrakar, Y. Huang, J. Rose, and **J. Mitchell*.** "Modeling the dose response relationship of waterborne *Acanthamoeba*" *Risk Analysis* (2021) 41 (1) 79-91 (https://doi-org.proxy1.cl.msu.edu/10.1111/risa.13603)
11. C. J. Ley, C. Proctor, K. Jordan, K. Ra, Y. Noh, T. Odimayomi, R. Julien, I. Kropp**, J. Mitchell**, A.P. Nejadhashemi, A. J. Whelton, T. Aw. Impacts of municipal water-rainwater source transitions on building plumbing and influence on microbial and chemical water quality dynamics at the tap. *Environmental Science & Technology* (2020) 54 (18) 11453–11463 (https://doi.org/10.1021/acs.est.0c03641)
12. U. Adhikari[1], E. Esfahanian, **J. Mitchell ***, D. Charbonneau, G. Song, and Y. Lu. Quantitation of Risk Reduction of *E. coli* Transmission After Using Antimicrobial Hand Soap. *Pathogens* (2020) 9(10), 778 (https://doi.org/10.3390/pathogens9100778)
13. C. Ley, C. R. Proctor, G. Singh, K. Ra, Y. Noh, T. Odimayomi, M. Salehi, R. Julien[1], **J. Mitchell**, A. P. Nejadhashemi, A. J. Whelton and T. Aw. Drinking water microbiology in a water-efficient building: Stagnation, seasonality, and physiochemical effects on opportunistic pathogen and total bacteria proliferation. *Environmental Science: Water Research & Technology* (2020) **6**, 2902-2913 (https://doi.org/10.1039/D0EW00334D)

14. **J. Mitchell***, K. Dean[1] and C. N. Haas. "Ebola Virus Dose Response Model for Aerosolized Exposures: Insights from Primate Data" *Risk Analysis* (2020) 40 (11) https://doi.org/10.1111/risa.13551
15. R. Julien[1], E. Dreelin, A. Whelton, J. Lee, T. Aw, K. Dean[1], and **J. Mitchell***. Knowledge Gaps and Risks Associated with Premise Plumbing Drinking Water Quality *AWWA Water Science* (2020) 2(3), e1177 (https://doi.org/10.1002/aws2.1177)
16. K. Dean[1] and **J. Mitchell***. "A dose response model for the inhalation route of exposure to *P. aeruginosa" Microbial Risk Analysis* (2020) 15, e100115 (https://doi.org/10.1016/j.mran.2020.100115)
17. Salehi, M., Odimayomi, T., Ra, K., Ley, C., Julien, R.[1], Nejadhashemi, A.P., Hernandez-Suarez, J.S., **Mitchell, J**., Shah, A.D. and Whelton, A.[3*]. An investigation of spatial and temporal drinking water quality variation in green residential plumbing. *Building and Environment*, (2020) 169, p.106566.
18. M. Weir, A. L. Mraz and **J.Mitchell**. "An Advanced Risk Modeling Method to Estimate Legionellosis Risks Within a Diverse Population" *Water* (2020) 12 (1) (doi: 10.3390/w12010043). Epub 2019 Dec 20
19. K. Dean[1], A. Wissler[1], J.S. Hernandez-Suarez, P. Nejadhashemi, and **J. Mitchell***. "Modeling the Persistence of Viruses in Untreated Groundwater" *Science of the Total Environment (*2020) May 15;717:134599. doi: 10.1016/j.scitotenv.2019.134599. Epub 2019 Nov 22.

D. Synergistic Activities

1. Executive Board of Microbial Risk Analysis Specialty Group - Past Chair (2022), Chair (2020-2021), Vice Chair (2019), Senior Secretary (2018), Secretary (2017), Society for Risk Analysis (SRA). *Elected Dec. 2016*
2. Current Co-Project Director (Lead PI), Developer, and Lecturer of the NIH funded QMRA IV Instructional Institute (#R25GM135058) and previously funded QMRA Interdisciplinary Instructional Institute (III) (2015-2019) (#R25GM108593)
3. Editorial Board member for *Risk Analysis,* two-year term beginning April 1, 2022
4. Guest Editor, "Global Systemic Risk and Resilience for Coronavirus COVID-19" Special Issue, Risk Analysis, Wiley ISSN:1539-6924
5. Served on Annual Meeting Conference Planning Committee, Microbial Stressors Lead for Risk 2020 Annual Meeting (Decmber13-17, 2020) and 2021 Annual Meeting (December 5-9, 2021)
6. Manager and editor the QMRA Wiki, an interactive platform for data sharing and collaboration (qmrawiki.org)