

SAMUEL D. HODGES

samueldhodes@gmail.com | (479) 879-1394

linkedin.com/in/samuel-d-hodes | Arkansas PE No.: 24150 | Tennessee PE No.: 1343983

EDUCATION

Ph.D. Civil Engineering	2023	University of Arkansas
M.S. Engineering-Civil	2019	LeTourneau University
B.S. Engineering-Civil	2016	LeTourneau University

SKILLS

Arc GIS	AutoCAD Civil 3D	Experimental Design	Field Inspection
HydroCAD	Laboratory Analysis	Lecturing	Microsoft Office Suite
Student Mentoring	R Studio	Teaching	WaterGEMS

RELEVANT EXPERIENCE

Civil Analyst-Development Services, Kimley-Horn, Memphis, TN **Sep 2025 – Present**

- Lead design of sanitary sewer gravity piping for large industrial site, West Memphis, AR
- Coordinate scope & fees for a small-scale lift station, West Memphis, AR
- Various coordination and production for a 300+ acre, industrial site, West Memphis, AR

Engineer in Training II-Water Resources, Buchar Horn, Memphis, TN **Jan 2025 – Aug 2025**

- Small scale study for adsorption removal of PFAS from a groundwater well
- Lead grading and drainage reviewer for the City of Memphis Land Development Office

Assistant Professor, Christian Brothers University, Memphis, TN **Jan 2024 – Dec 2024**

- CBU 101 Orientation to CBU, CE 110 Introduction to Civil Engineering, CE 299 Hydraulics, CE 299L Hydraulics Lab, CE 313 Hydrology, CE 329 & 429 Environmental Engineering I & II, CE 431 Senior Project I & II, CE 489 Licensing and Certification in Civil Engineering

Graduate Research Assistant, University of Arkansas, Fayetteville, AR **Sept 2016 – May 2019**

- Coordinated sample collection and testing for chloronitramide anion study including ion chromatography and UV spectroscopy analysis, funded by NSF grant #2034481

Publications

- Fairey J. L.; Laszakovits J.; Pham, H. T.; Do, T. D.; **Hodges, S. D.**; McNeill, C.; Wahman, D. G. "Chloronitramide anion is a decomposition product of inorganic chloramines". *Science* 386, 882–887 (2024). DOI: 10.1126/science.adk6749
 - Lead laboratory investigator for the development of diffusive gradients in thin-films passive sampling methodology for per- and polyfluoroalkyl (PFAS) substances in water, funded by SERDP Project ER20-1363
 - Designed and validated a diffusion cell protocol to measure organic diffusion coefficients in hydrogels
 - Developed a finite difference model (R-Studio) to represent diffusion through diffusive gels
 - Modeling and quantification of the diffusion coefficients of a suite of 32 PFAS compounds
 - Uptake and extraction efficiency experiments of weak anion exchange resins for PFAS compounds
- #### *Publications*
- **Hodges, S. D.**; Wahman, D. G.; Hauptert, L. M.; Pham, H. T.; Bozarth, M. K.; Howland, M. B.; Fairey, J. L. "Non-Steady-State Fickian Diffusion Models Decrease the Estimated Gel Layer Diffusion Coefficient Uncertainty for Diffusive Gradients in Thin-Films Passive Samplers". *Environmental Science & Technology* 2023, 57 (26), 9793-9801. DOI: 10.1021/acs.est.3c01861.

- Harris, B. J.; **Hodges, S. D.**; Wahman, D. G.; Hauptert, L. M.; Chimka, J. R.; Fairey, J. L. "PFAS Quantitation with Diffusive Gradients in Thin-Film Passive Samplers: Capturing Time-Weighted Average Concentrations Around Maximum Contaminant Levels to Facilitate Compliance". Water Research 2026

Conference Presentations

- **Hodges, S. D.**, et al. (2025) "PFAS in the Environment: Fate, Transport, and a Novel Low-Cost Monitoring Approach" Accepted: 2025 PA-AWWA 77th Annual Conference & Expo, Pocono Manor, PA.
- **Hodges, S. D.**, et al. (2022) "Advancing the Diffusive Gradients in Thin-Films Passive Sampling Device for Monitoring PFAS in Drinking Water Systems." Accepted: 2022 AWWA Water Quality Technology Conference, Cincinnati, OH.

Poster Presentations

- **Hodges, S. D.**, Howland, M. B., Pham, H. T., Fairey, J. L. "Development of a Diffusive Gradients in Thin-Films Passive Sampling Device for PFAS (ER20-1363)" 2022 SERDP & ESTCP and OE-Innovation Symposium
- **Hodges, S. D.**, Pham, H. T., Fairey, J. L. "Development of a Diffusive Gradients in Thin-Films Passive Sampling Device for PFAS (ER20-1363)" 2022 SERDP & ESTCP PFAS Project Meeting
- **Hodges, S. D.**, Nepomuceno, S. U., Panda, D., Fairey, J. L. "Development of a Diffusive Gradients in Thin-Films Passive Sampling Device for PFAS (ER20-1363)" 2021 SERDP & ESTCP PFAS Project Meeting
- Pilot scale biofilters for trihalomethane precursor removal
 - Sampled and water quality parameters (DOC/UVSpec/TTHM) for DBP precursor removal assessment

Engineering Intern, Olsson, Fayetteville, AR

May 2019 – Nov 2019

- Master plan clearwell CT study and finished water line, Lowell, AR
- Raw water pump upgrade, Holiday Island, AR

Engineering Lab Technician, LeTourneau University, Longview, TX

Sept 2016 – May 2019

- Supervised and maintained over 30,000 sq-ft of lab space
- Supervised undergraduate lab experimentation for full range of civil engineering courses

COMMITTEES AND VOLUNTEER WORK

Cold Regions Engineering Division Committee Member, ASCE

Sep 2025 – Present

- Member of the committee charged with re-writing the Cold Regions Utility Monograph

Project Advisory Committee Member, The Water Research Foundation

Jun 2025 – Present

- Committee member for PFAS proposal review

Engineering Advisory Board Member, Northrise University, Ndola, Zambia

Apr 2023 – Present

- Advisory board responsible for advising on strategic growth in the school of engineering

Curriculum Committee Member, Northrise University, Ndola, Zambia

Aug 2018 – Aug 2023

- Participated in weekly meetings to aid ongoing development
- Developed course contents for the Civil Engineering curriculum

PROFESSIONAL ORGANIZATION INVOLVMENT

Member ASCE 2012–Present
Member AWWA 2019–2025

Member ITRC 2023–Present
Member ACS 2022–2025

Board Member TSPE 2024–2025
Member AEESP 2020–2025