CURRICULUM VITAE

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EDUCATION

Ph.D., University of California Berkeley, Civil and Environmental Engineering, 2005
M.S., University of California Berkeley, Civil and Environmental Engineering, 1999
B.S., University of Pennsylvania, Civil Engineering Systems, *cum laude*, 1995

REGISTRATION

Professional Engineer, Colorado #39561, California #68010

PROFESSIONAL EXPERIENCE

University of Colorado Denver, Associate Professor 2023-present, Professor Clinical Teaching Track 2018-2023, Associate Professor Clinical Teaching Track 2014-2018, Assistant Professor 2005-2014.
Merrick and Company, Los Alamos, New Mexico, Civil Engineer, 1996-1998
Teach for America, St. Martinville, Louisiana, High School Teacher, 1995-1996

PEER REVIEWED PUBLICATIONS[1]

UNDER REVIEW

Goodman, K.A., H.L. Johnson, M. Darbeheshti, M. Evans, and D.C. Mays, Nudging engineering faculty to enact techniques for inclusive teaching, *Studies in Engineering Education* (under review).

[1] Student co-authors are shown in **bold**.

43. **Fahrney, E.E.**, D.C. Mays, and C.P. Newman (2025), Systematic approach to prioritize wells for groundwater monitoring in the Arkansas River Headwaters Basin, Colorado, USA, *Journal of Hydrology—Regional Studies* (in press).

42. Mays, D.C., T.M. Roane, B.J. Allen, R. Moreno-Sanchez, G. RedShirt Tyon, **C. Rice**, **J.L. Romero**, and C. Velez (2025),[2] Fitting college to students (not vice versa): A certificate program on environmental stewardship of Indigenous lands, *Advances in Engineering Education*, 13(1), 49-75. https://doi.org/10.18260/3-1-1153-36072

41. Mays, D.C., T.M. Roane, R. Moreno-Sanchez, **C. Rice**, **J.L. Romero**, and C. Velez (2025), Wayfinding, knowledge, perspective, and engagement: Preparing tribal liaisons for stewardship of Indigenous lands, *Ecosphere*, 16(3): e70181. https://doi.org/10.1002/ecs2.70181

40. **Humphreys, K.M.** and D.C. Mays (2025), Evaluating trends and insights from historical suspended sediment and land management data in the South Fork Clearwater River Basin, Idaho County, Idaho, USA, *Hydrology*, 12(3), 50. https://doi.org/10.3390/hydrology12030050

39. **Mont-Eton, M.E.**, S. Borgwardt, and D.C. Mays (2024), Inverse method to determine hydraulic conductivity from a velocity field using graph theory, *InterPore Journal*, 1(3), IPJ271124–5. https://doi.org/10.69631/ipj.v1i3nr30

38. Goodman, K.A., H.L. Johnson, M. Darbeheshti, T. Altman, and D.C. Mays (2024), Setting a better default: Designing a Welcome Academy for New Faculty centered on inclusive teaching in engineering, *International Journal of Designs for Learning*, 15(2), 14-25. https://doi.org/10.14434/ijdl.v15i2.36438

37. **Tigera, R.G.**, **W.L. Benson**, and D.C. Mays (2023)**,** Thermally enhanced spreading of miscible plumes in porous media, *Hydrology*, 10, 98. https://doi.org/10.3390/hydrology10040098

36. **Sather, L.J.**, **E.J. Roth**, R.M. Neupauer, J.P. Crimaldi, and D.C. Mays (2023), Experiments and simulations on plume spreading by engineered injection and extraction in refractive index matched porous media, *Water Resources Research*, 59, e2022WR032943. https://doi.org/10.1029/2022WR032943

35. **Sturgell, F.D.** and D.C. Mays (2023), Pneumatic evacuation to prevent freezing in outdoor sump pump drains, *Journal of Cold Regions Engineering*, 37(2), 06023001. https://doi.org/10.1061/JCRGEI.CRENG-619

[2] Featured in the publisher's monthly magazine *Prism*.

34. **Rice, C.** and D.C. Mays (2022), Building diversity, equity, and inclusion into an engineering course, *Advances in Engineering Education*, 10(4), 2-11. https://doi.org/10.18260/3-1-1153-36034

33. Velez, C., B.M. Nuechterlein, S.C. Connors, G. RedShirt Tyon, T.M. Roane, and D.C. Mays (2022),[3] Application of the Indigenous evaluation framework to a university certificate program for building cultural awareness in science, technology, engineering, and mathematics, *Evaluation and Program Planning*, 92, 102066, doi:10.1016/j.evalprogplan.2022.102066. https://doi.org/10.1016/j.evalprogplan.2022.102066

32. **Sather, L.J.,** R.M. Neupauer, D.C. Mays, **E.J. Roth,** and J.P. Crimaldi (2022), Active spreading: Hydraulics for enhancing groundwater remediation, *Journal of Hydrologic Engineering*, 27(5), 04022007. https://doi.org/10.1061/(ASCE)HE.1943-5584.0002167

31. Neupauer, R.M., **E.J. Roth,** J.P. Crimaldi, D.C. Mays, and **L.J. Sather** (2021), Demonstration of reversible dispersion in a Darcy-scale push-pull laboratory experiment, *Transport in Porous Media*. https://doi.org/10.1007/s11242-021-01682-3

30. **Johnk, B.T.** and D.C. Mays (2021), Wildfire impacts on groundwater aquifers: A case study of the 1996 Honey Boy fire in Beaver County, Utah, USA, *Water*, 13(16), 2279. https://doi.org/10.3390/w13162279

29. **Roth, E.J.**, D.C. Mays, R.M. Neupauer, **L.J. Sather**, and J.P. Crimaldi (2021), Methods for laser-induced fluorescence imaging of solute plumes at the Darcy scale in quasi-two-dimensional, refractive index-matched porous media, *Transport in Porous Media*, 136, 879–898. https://doi.org/10.1007/s11242-021-01545-x

28. Neupauer, R.M., **L.J. Sather**, D.C. Mays, J.P. Crimaldi, and **E.J. Roth** (2020), Contributions of pore-scale mixing and mechanical dispersion to reaction in radial groundwater flow, *Water Resources Research*, 56(7). https://doi.org/10.1029/2019WR026276

27. **Roth, E.J.**, R.M. Neupauer, D.C. Mays, **L.J. Sather**, and J.P. Crimaldi (2020), Wall effect mitigation techniques for experiments with planar walls, *Transport in Porous Media*, 132, 423-441. https://doi.org/10.1007/s11242-020-01399-9

26. Mays, D.C. and T.D. Scheibe (2018), Groundwater contamination, subsurface processes, and remediation methods: Overview of the special issue of *Water* on groundwater contamination and remediation, *Water*, 10, 1708. https://doi.org/10.3390/w10121708

25. **Chinnasamy, C.V.**, **W.C. McIntyre**, and D.C. Mays (2018), Technical and administrative feasibility of alluvial aquifer storage and recovery on the South Platte River of northeastern Colorado, *Water Policy*, 20(4), 841-854. https://doi.org/10.2166/wp.2018.174

[3] Featured as Editor's Choice.

24. Klingensmith III, W.C. and D.C. Mays (2018), Information content of wastewater flowmeter data before and during a surcharge, *Journal of Environmental Engineering*, 144(9), 05018004. http://doi.org/10.1061/(ASCE)EE.1943-7870.0001415

23. **Zivkovich, B.R.** and D.C. Mays (2018), Predicting nonpoint stormwater runoff quality from land use, *PLOS ONE*, 13(5). https://doi.org/10.1371/journal.pone.0196782

22. **McIntyre, W.C.** and D.C. Mays (2017), Roles of the water court and the State Engineer for water administration in Colorado, *Water Policy*, 19(4), 837-850. http://doi.org/10.2166/wp.2017.145

21. **Roth, E.J.**, B. Gilbert, and D.C. Mays (2015), Colloid deposit morphology and clogging in porous media: Fundamental insights through investigation of deposit fractal dimension, *Environmental Science and Technology*, 49(20), 12263–12270. http://doi.org/10.1021/acs.est.5b03212

20. **Roth, E.J.**, **M.E. Mont-Eton**, B. Gilbert, T.C. Lei, and D.C. Mays (2015), Measurement of colloidal phenomena during flow through refractive index matched porous media, *Review of Scientific Instruments*, 86, 113103. https://doi.org/10.1063/1.4935576

19. **Sanchez II, N.** and D.C. Mays (2015), Effect of methane leakage on the greenhouse gas footprint of electricity generation, *Climatic Change*, 133(2), 169-178. http://doi.org/10.1007/s10584-015-1471-6

18. Neupauer, R.M. and D.C. Mays (2015), Engineered injection and extraction for in situ remediation of sorbing solutes in groundwater, *Journal of Environmental Engineering*, 141(6), 04014095, 1-12. http://doi.org/10.1061/(ASCE)EE.1943-7870.0000923

17. **Krauss, E.D.** and D.C. Mays (2014),[4] Modification of the Kozeny-Carman equation to quantify formation damage by fines in clean unconsolidated porous media, *SPE Reservoir Evaluation and Engineering*, 17(4), 466-472. http://doi.org/10.2118/165148-PA

16. Neupauer, R.M., J.D. Meiss, and D.C. Mays (2014), Chaotic advection and reaction during engineered injection and extraction in heterogeneous porous media, *Water Resources Research*, 50(2), 1433-1447. http://doi.org/10.1002/2013WR014057

15. **Piscopo, A.N.**, R.M. Neupauer, and D.C. Mays (2013), Engineered injection and extraction to enhance reaction for improved in situ remediation, *Water Resources Research*, 49(6), 3618-3625. http://doi.org/10.1002/wrcr.20209

[4] Featured on the cover of its issue.

14. Mays, D.C. and R.M. Neupauer (2013), Reply to comment by D.R. Lester *et al.* on "Plume spreading in groundwater by stretching and folding," *Water Resources Research*, 49(2), 1192-1194. http://doi.org/10.1002/wrcr.20081

13. **Rhodes, E.P.**, Z.J. Ren, and D.C. Mays (2012), Zinc leaching from tire crumb rubber, *Environmental Science and Technology*, 46(23), 12856-12863. http://doi.org/10.1021/es3024379

12. Mays, D.C. and R.M. Neupauer (2012), Plume spreading in groundwater by stretching and folding, *Water Resources Research*, 48, W07501. https://doi.org/10.1029/2011WR011567

11. Manga, M., I. Beresnev, E.E. Brodsky, J.E. Elkhoury, D. Elsworth, S. Ingebritsen, D.C. Mays, and C.-Y. Wang (2012),[5] Changes in permeability by transient stresses: Field observations, experiments, and mechanisms, *Reviews of Geophysics*, 50, RG2004. https://doi.org/10.1029/2011RG000382

10. **Coughlin, J.P.**, **C.D. Campbell**, and D.C. Mays (2012), Infiltration and clogging by sand and clay in a pervious concrete pavement system, *Journal of Hydrologic Engineering*, 17(1), 68-73. http://doi.org/10.1061/(ASCE)HE.1943-5584.0000424

9. Mays, D.C., **O.T. Cannon**, **A.W. Kanold**, **K.J. Harris**, T.C. Lei, and B. Gilbert (2011), Static light scattering resolves colloid structure in index-matched porous media, *Journal of Colloid and Interface Science*, 363, 418-424. http://doi.org/10.1016/j.jcis.2011.06.046

8. Mays, D.C. (2010), Contrasting clogging in granular media filters, soils, and dead-end membranes, *Journal of Environmental Engineering*, 136(5), 475-480. http://doi.org/10.1061/(ASCE)EE.1943-7870.0000173

7. Mays, D.C. (2010), One-week module on stochastic groundwater modeling, *Journal of Geoscience Education*, 58(2), 73-81. https://doi.org/10.5408/1.3534852

6. Mays, D.C. (2007), Using the Quirk-Schofield diagram to explain environmental colloid dispersion phenomena, *Journal of Natural Resources and Life Sciences Education*, 36, 45-52. https://doi.org/10.2134/jnrlse2007.36145x

5. Mays, D.C. and J.R. Hunt (2007), Hydrodynamic and chemical factors in clogging by montmorillonite in porous media, *Environmental Science and Technology*, 41(16), 5666-5671. http://doi.org/10.1021/es062009s

4. Mays, D.C. and J.R. Hunt (2005), Hydrodynamic aspects of particle clogging in porous media, *Environmental Science and Technology*, 39(2), 577-584. http://doi.org/10.1021/es049367k

[5] All authors contributed equally.

3. Mays, D.C., B.A. Faybishenko and S. Finsterle (2002), Information entropy to measure temporal and spatial complexity of unsaturated flow in heterogeneous media, *Water Resources Research*, 38(12), 1313. https://doi.org/10.1029/2001WR001185

2. Mays, D.C. and B.A. Faybishenko (2000), Washboards in unpaved highways as a complex dynamic system, *Complexity*, 5(6), 51-60. http://doi.org/10.1002/1099-0526(200007/08)5:6%3C51::AID-CPLX11%3E3.0.CO;2-B

1. Mays, D.C. and S.J. Veenis (1998), Matrix approach to contaminant transport potential, *Practice Periodical of Hazardous, Toxic and Radioactive Waste Management*, 2(3), 120-122. http://doi.org/10.1061/(ASCE)1090-025X(1998)2:3(120)

PEER REVIEWED CONFERENCE PROCEEDINGS

7. **Coughlin, J.P.**, H.L. Johnson, and D.C. Mays (2025), Work in progress: Torque, engineering students, and the conceptual shift from external to internal forces, Annual Conference, American Society for Engineering Education, Montreal, Quebec, Canada, June 22-25, 2025. https://doi.org/10.18260/1-2--57514

6. Evans, M., T. Altman, M. Darbeheshti, K.A. Goodman, H.L. Johnson, and D.C. Mays (2025), Lessons learned: Motivational factors for engineering faculty seeking professional development for inclusive teaching, Annual Conference, American Society for Engineering Education, Montreal, Quebec, Canada, June 22-25, 2025. https://doi.org/10.18260/1-2--56919

5. Mays, D.C., T. Altman, M. Darbeheshti, P. Hwang, C. McCall, S. Secules, M. Vazquez, and K. Watts (2025), Resetting the default: Welcoming new engineering faculty to inclusive teaching, Annual Conference, American Society for Engineering Education, Montreal, Quebec, Canada, June 22-25, 2025. https://doi.org/10.18260/1-2--57134

4. Darbeheshti, M., T. Altman, K.A. Goodman, H.L. Johnson, M. Evans, and D.C. Mays (2024), Building community for inclusive teaching: Can we bridge the valley of neglect? Annual Conference, American Society for Engineering Education, Portland, Oregon, June 23-26, 2024. https://doi.org/10.18260/1-2--46784

3. Goodman, K.A., M. Darbeheshti, D.C. Mays, T. Altman, and H.L. Johnson (2023), From cohort to classroom: Transitioning to year 2 in a faculty learning community, Annual Conference, American Society for Engineering Education, Baltimore, Maryland, June 25-28, 2023. https://doi.org/10.18260/1-2--42810

2. Collopy, A.X., H.L. Johnson, K.A. Goodman, T. Altman, M. Darbeheshti, K.L. Wood, and D.C. Mays (2022), Exploring nudging approaches for growing a culture of diversity and inclusion with engineering faculty, Annual Conference, American Society for Engineering Education, Minneapolis, Minnesota, June 26-29, 2022. https://doi.org/10.18260/1-2--42018

1. Mays, D.C. and R.M. Neupauer (2017), Chaotic advection and unsteady flow in groundwater remediation, *Waste Management Symposium 2017: Building Global Trust in Decommissioning and Radioactive Waste Management*, Phoenix, Arizona, March 5-9, 2017. https://par.nsf.gov/servlets/purl/10397689

PEER REVIEWED BOOK CHAPTERS

5. Mays, D.C. (2013), Clogging in managed aquifer recharge: Flow, geochemistry, and clay colloids, in Martin, R., ed., *Clogging Issues Associated with Managed Aquifer Recharge Methods*, International Association of Hydrogeologists (IAH) Commission on Managing Aquifer Recharge, Australia, 14-24. https://recharge.iah.org/files/2015/03/Clogging_Monograph.pdf

4. Chan Hilton, A.B., J.W. Lauer, D.C. Mays, R.M. Neupauer, A. Sciortino (2012), Resources for teaching water resources, Chapter 7 in Chan Hilton, A.B. and R.M. Neupauer, eds., *$H_2Oh!$ Classroom Demonstrations for Water Concepts*, American Society of Civil Engineers, Reston, Virginia, 129-134. https://doi.org/10.1061/9780784412541

3. **Kanold, A.W.** and D.C. Mays (2012), Porosity, Section 5.1 in Chan Hilton, A.B. and R.M. Neupauer, eds., *$H_2Oh!$ Classroom Demonstrations for Water Concepts*, American Society of Civil Engineers, Reston, Virginia, 99-100. https://doi.org/10.1061/9780784412541
2. Mays, D.C. (2012), Atmospheric water, Section 4.1 in Chan Hilton, A.B. and R.M. Neupauer, eds., *$H_2Oh!$ Classroom Demonstrations for Water Concepts*, American Society of Civil Engineers, Reston, Virginia, 72-74. https://doi.org/10.1061/9780784412541

1. Mays, D.C. (2012), NAPL ganglia, Section 5.9 in Chan Hilton, A.B. and R.M. Neupauer, eds., *$H_2Oh!$ Classroom Demonstrations for Water Concepts*, American Society of Civil Engineers, Reston, Virginia, 115-116. https://doi.org/10.1061/9780784412541

GRANTS

PENDING

PI: Collaborative research: Planning: Track 1: Nudging engineering faculty to broaden participation, U.S. National Science Foundation, Broadening Participation in Engineering (BPE), requested **$75,000** in January 2025.

FUNDED

12. PI: Transforming pockets of innovation into institutional structures for learning, U.S. National Science Foundation, Hispanic-Serving Institutions: Enriching Learning, Programs, and Student Experiences (HSI:ELPSE), Award 2524321, awarded **$500,000** from 2026-2028.

11. PI: Meet our moment: Engineering can work for everyone, University of Colorado Denver, Grand Challenges Grants Program, awarded **$100,000** from 2024-2025.

10. PI: Engineering is not neutral: Transforming instruction via collaboration and engagement (ENNTICE), U.S. National Science Foundation, Broadening Participation in Engineering, Award 2040095, awarded **$350,000** from 2021-2025.

9. Co-PI: NSF INCLUDES alliance: Broadening career pathways in food, energy, and water systems with and within Native American communities (Native FEWS Alliance), U.S. National Science Foundation, Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES), Award 2120001, awarded **$299,776** from 2021-2026.

8. PI: Environmental Stewardship of Indigenous Lands Scholarship Program, U.S. National Science Foundation, Scholarships for Science, Technology, Engineering, and Mathematics (S-STEM), Award 1742603, awarded **$1,000,000** from 2018-2024.

7. Co-PI: NSF INCLUDES DDLP: Building a network for education and employment in environmental stewardship of Indigenous lands, U.S. National Science Foundation, Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES), Award 1744524, awarded **$298,484** from 2018-2020.

6. PI: Hydrologic and microbiological impacts of sealing abandoned mines with bulkheads, University of Colorado Denver, Office of Research Services, awarded **$24,000** from 2017-2018.

5. PI: Collaborative research: Coupled numerical and laboratory investigations of chaotic advection to enhance spreading and reaction in three-dimensional, heterogeneous porous media, U.S. National Science Foundation, Hydrologic Sciences Program, Award 1417005, awarded **$90,626** from 2014-2018.

4. PI: Collaborative research: Innovative injection and extraction schemes to enhance mixing in aquifers for improved in situ remediation, U.S. National Science Foundation, Hydrologic Sciences Program, Award 1113996, awarded **$98,395** from 2011-2014.

3. PI: Linking deposit morphology and clogging in subsurface remediation, U.S. Department of Energy, Subsurface Biogeochemical Research Program, awarded **$150,000** from 2011-2013.

2. PI: Trash to treasure: Using crumb rubber from recycled tires for stormwater pollution control, Colorado Department of Public Health and Environment, Advanced Technology Grant Program, awarded **$96,600** from 2009-2011.

1. Co-PI: In situ measurement of deposit morphology in porous media, Lawrence Berkeley National Laboratory, Earth Sciences Division, awarded **$50,000** from 2007-2011.

OTHER SCHOLARLY ACTIVITY

PATENT PENDING

Mays, D.C.; **R.G. Tigera**, and **W. Benson** (2023), Enhanced plume spreading, U.S. Patent Application 18/520,924, filed 11/28/2023, U.S. Patent and Trademark Office, Washington, DC.

EDITORSHIP

Scheibe, T.D. and D.C. Mays (2018), *Groundwater Contamination and Remediation: Printed Edition of the Special Issue Published in* Water, Multidisciplinary Digital Publishing Institute (MDPI), Basel, Switzerland, ISBN 978-3-03897-429-1.

DATA AND MODELS

6. **Fahrney, E.E.**, D.C. Mays, and C.P. Newman (2025). Codes and results to prioritize wells for groundwater monitoring in the Arkansas River Headwaters Basin, Colorado, USA, HydroShare, https://doi.org/10.4211/hs.7e0192daba5e4b5ebdc3619a867507f6

5. **Cook, T.J.** and D.C. Mays (2024), Videos, photographs, and hydraulic head data from a series of laboratory experiments on reactive transport of calcium carbonate precipitate in quasi-2D porous media, HydroShare, https://doi.org/10.4211/hs.fa5884a58b2e4d8b94db1b8cdca3fd36.

4. **Mont-Eton, M.E.**, D.C. Mays and S. Borgwardt (2024), FlowPaths model and simulations, HydroShare, https://doi.org/10.4211/hs.191c41fcb8294d6ab46484be693999a0.

3. **Humphreys, K.M.** and D.C. Mays (2024), Estimated streamflow, measured suspended sediment concentration, spatial land use data, and associated R scripts for evaluating total maximum daily load (TMDL) of turbidity in the South Fork Clearwater River, Idaho, USA, HydroShare, https://doi.org/10.4211/hs.4fc104e85b4e4948a8a68ab73321a066.

2. **Grote, M.E.** and D.C. Mays (2023), Videos, photographs, and hydraulic head data from a laboratory experiment on reactive transport and precipitation of calcium carbonate in quasi-2D porous media, HydroShare, https://doi.org/10.4211/hs.85ab6b1a6147476ebc40a8adb39f6542.

1. **Sather, L.J.**, **E.J. Roth**, R.M. Neupauer, J.P. Crimaldi, and D.C. Mays (2023), Plume spreading experiments and simulations, HydroShare, https://doi.org/10.4211/hs.4b8575d3031c40d4a39f945db8f02ae5.

PODCASTS AND VIDEOS

4. Mays, D.C. (2021), CU Denver engineers diverse ways to serve communities, CU On The Air, http://cuontheair.blubrry.net/2021/10/26/cu-denver-is-engineering-diverse-ways-to-serve-communities/.

3. Mays, D.C. (2021), Diversity, equity, and inclusion: How diversity makes better engineering teams, https://youtu.be/McbJDqIhxSE.

2. Mays, D.C. (2021), Hydrostatics, https://youtu.be/NLyCB2WOQvI.

1. Coughlin, J.P., M.S. Zarske, and D.C. Mays (2018), Quicksand danger: Myth or reality? TeachEngineering: STEM Curriculum for K-12, https://www.teachengineering.org.

PROFESSIONAL DEVELOPMENT

9. AMPLIFY Institute, University of Texas at El Paso, September 26-27, 2024.

8. Inclusive Pedagogy Academy, Center for Excellence in Teaching and Learning, University of Colorado Denver, January 15-June 18, 2021.

7. Creating an Inclusive and Supportive Online Learning Environment, microcredential, Association of College and University Educators (ACUE), April 8-May 11, 2021.

6. Hybrid-Flexible Teaching Summer Academy, thinqstudio, University of Colorado Denver, June 1-August 7, 2020.

5. Aspire Summer Institute, Aspire National Alliance for Inclusive and Diverse STEM Faculty, University of Wisconsin at Madison, June 15-19, 2020.

4. Institute for the Development of Excellence in Assessment Leadership, Accreditation Board for Engineering and Technology (ABET), New Orleans, Louisiana, January 5-8, 2015.

3. Exploring Cultural Competency, Faculty Learning Community, Metropolitan State University of Denver and Regis University, Denver, Colorado, 2013-2014.

2. Excellence in Civil Engineering Education (ExCEEd) Workshop, American Society of Civil Engineers, University of Northern Arizona, Flagstaff, Arizona, July 16-20, 2007.

1. Summer Institute, Teach for America, University of Houston, June-July 1995.

NON-PEER REVIEWED PUBLICATIONS

PROCEEDINGS PAPERS

20. Neupauer, R.M., D.C. Mays, M. Ye, and J.A. Greene (2022), Comparison of Effective Active Spreading Designs for In-Situ Groundwater Remediation, *World Environmental and Water Resources Congress*, American Society of Civil Engineers, Atlanta, Georgia, June 5-8, 2022.

19. Quinn, J.T., R.M. Neupauer, **L.J. Sather**, D.C. Mays, J.P. Crimaldi, and **E.J. Roth** (2022), Effects of active and passive spreading on mixing and reaction during in-situ groundwater remediation, *World Environmental and Water Resources Congress*, American Society of Civil Engineers, Atlanta, Georgia, June 5-8, 2022.

18. Mizyed, N. and D.C. Mays (2020), Reuse of treated wastewater: From technical innovation to legitimization, *World Environmental and Water Resources Congress*, American Society of Civil Engineers, Henderson, Nevada, May 17-21, 2020, 16-30, doi:10.1061/9780784482988.003.

17. Neupauer, R.M., **L.J. Sather**, **E.J. Roth**, D.C. Mays, and J.P. Crimaldi (2020), Numerical and experimental investigation of active and passive spreading for groundwater remediation, *World Environmental and Water Resources Congress*, American Society of Civil Engineers, Henderson, Nevada, May 17-21, 2020, 97-103, doi: 10.1061/9780784482964.010.

16. **Greene, J.A.**, R.M. Neupauer, M. Ye, J.R. Kasprzyk, D.C. Mays, and G.P. Curtis (2017), Engineered injection and extraction for remediation of uranium-contaminated groundwater, in *World Environmental and Water Resources Congress 2017: Groundwater, Sustainability, and Hydro-Climate/Climate Change*, Dunn, C.N. and Van Weele, B., eds., American Society of Civil Engineers, Reston, Virginia, 111-118.

15. **Ritsch, C.**, R.M. Neupauer, and D.C. Mays (2017) Naturally-occurring chaotic advection in groundwater and surface-water systems, in *World Environmental and Water Resources Congress 2017: Groundwater, Sustainability, and Hydro-Climate/Climate Change*, Dunn, C.N. and Van Weele, B., eds., American Society of Civil Engineers, Reston, Virginia, 102-110.

14. **Piscopo, A.N.**, J.R. Kasprzyk, R.M. Neupauer, and D.C. Mays (2014), An iterative approach to many objective engineering design: Balancing conflicting objectives for engineered injection and extraction, in *World Environmental and Water Resources Congress 2014: Water Without Borders*, Huber, W.C., ed., American Society of Civil Engineers, Reston, Virginia, 1826-1833.

13. Neupauer, R.M. and D.C. Mays (2014), Engineered injection and extraction for in situ remediation of sorbing contaminants in aquifers, in *World Environmental and Water Resources Congress 2014: Water Without Borders*, Huber, W.C., ed., American Society of Civil Engineers, Reston, Virginia, 227-234.

12. **Krauss, E.D.** and D.C. Mays (2013), Modification of the Kozeny-Carman equation to quantify formation damage by fines in clean unconsolidated porous media, SPE-165148, 10th International Conference and Exhibition on European Formation Damage, Society of Petroleum Engineers, Noordwijk, Netherlands, June 5-7, 2013, doi:10.2118/165148-MS.

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4. Mays, D.C. (2013), Linking deposit morphology and clogging in subsurface remediation, submitted to the Subsurface Biogeochemical Research Program, U.S. Department of Energy, Washington, DC.

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MAGAZINE ARTICLES

6. Mays, D.C., T.M. Roane, B.J. Allen, R. Moreno-Sanchez, G. RedShirt Tyon, **C. Rice**, **J.L. Romero**, and C. Velez (2025), A better fit, *Prism*, Summer 2025, 22.

5. Mays, D.C. (2022), How diversity makes better engineering teams, *Journal AWWA*, American Water Works Association, September 2022, 62-67.

4. Roane, T.M., G. RedShirt Tyon, D.C. Mays, R. Moreno-Sanchez, and B.J. Allen (2021), Bringing Indigenous perspectives to STEM, *Winds of Change*, Summer 2021.

3. McIntyre, W.C., C.V. Chinnasamy, and D.C. Mays (2018), Alluvial aquifer storage and recovery offers water storage management response to climate change and population growth, *International Water Association (IWA) Publishing News*, September 2018.

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PRESENTATIONS at MEETINGS

INVITED TALKS

8. **Fahrney, E.E.**, D.C. Mays, and C.P. Newman (2024), Prioritizing wells for long-term monitoring in the Arkansas Headwaters Basin, Annual Symposium, American Water Resources Association Colorado and Colorado Ground Water Association, Golden, Colorado, April 19, 2024.

7. Mays, D.C. and R.M. Neupauer (2017), Chaotic advection for groundwater remediation: simulations, experiments, and (future) field tests, Ground Water Forum, U.S. Environmental Protection Agency, Denver, Colorado, October 17-19, 2017.

6. Neupauer, R.M. and D.C. Mays (2017), Chaotic advection to amplify plume spreading for accelerated chemical reactions in porous media, Ground Water Forum, U.S. Environmental Protection Agency, Denver, Colorado, October 17-19, 2017.

5. Mays, D.C., R.M. Neupauer, and **A.N. Piscopo** (2016), Improved delivery of groundwater remediation amendments by chaotic advection, Tenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Battelle Memorial Institute, Palm Springs, California, May 22-26, 2016.

4. Mays, D.C., **M.N. Jones** and R.M. Neupauer (2014), Practical application of chaotic advection to groundwater remediation, Complex Soil Systems Conference, Lawrence Berkeley National Laboratory, Berkeley, California, September 3-5, 2014.

3. Neupauer, R.M. and D.C. Mays (2012), Chaotic advection and spreading in porous media, Annual Meeting, International Society for Porous Media, West Lafayette, Indiana, May 14-16, 2012.

2. Mays, D.C. (2010), Colloidal effects on the permeability of granular media filters, soils, and aquifers, Dynamically Determined and Controlled Permeability Conference, U.S. Department of Energy, San Francisco, California, December 11-12, 2010.

1. Mays, D.C., **O.T. Cannon**, **A.W. Kanold**, **K.J. Harris**, T.C. Lei and B. Gilbert (2010), In situ measurement of the fractal dimension of colloid deposits in porous media, Talk 68-9, Annual Meeting, Geological Society of America, Denver, Colorado, October 31-November 3, 2010.

CONTRIBUTED TALKS

44. Mays, D.C. and R.M. Neupauer (2025), Review of chaotic advection in porous media, Annual Meeting, International Society for Porous Media (InterPore), Albuquerque, New Mexico, May 19-22, 2025.

43. **Coughlin, J.P.**, H.L. Johnson, and D.C. Mays (2025), Student intuitions of torque as proprioception, Rocky Mountain Section Conference, American Society for Engineering Education, Boulder, Colorado, May 14-16, 2025.

42. Mays, D.C., R. Moreno-Sanchez, **C. Rice**, **J.L. Romero**, and T.M. Roane (2024), Six years of workshops for environmental stewardship of Indigenous lands, SY43F-07, Annual Meeting, American Geophysical Union, Washington, DC, December 9-13, 2024.

41. **Rice, C.**, T.M. Roane, **J. Romero**, C. Velez, A. White Eagle, and D.C. Mays (2023), Building a liaison certificate in FEWS: Considerations and next steps, 2nd Annual Gathering, Native FEWS Alliance, Tucson, Arizona 21-24 March 2023.

40. Mays, D.C., R. Moreno-Sanchez, and T.M. Roane (2022), Developing a multi-institutional certificate program to center Indigenous knowledges in STEM curricula, ED43A-04, Fall Meeting, American Geophysical Union, Chicago, Illinois, December 12-16, 2022.

39. **Mont-Eton, M.E.** and D.C. Mays (2021), Inverse method to determine hydraulic conductivity from a measured velocity field, H13B-068, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 13-17, 2021.

38. Mays, D.C., T.M. Roane, R. Moreno, G. RedShirt Tyon, and B.J. Allen (2021), Environmental Stewardship of Indigenous Lands Scholarship Program, 2021 Virtual S-STEM Fall Forum Workshop, U.S. National Science Foundation, September 30-October 1, 2021. https://youtu.be/T4pS1jylj3E.

37. Moreno-Sanchez, R., T.M. Roane, D.C. Mays, B.J. Allen, and G. RedShirt Tyon (2021), Lessons learned in the design and operation of the Certificate in Environmental Stewardship of Indigenous Lands, Annual Meeting, American Association of Geographers, online, April 7-11, 2021.

36. Roane, T.M., D.C. Mays, R. Moreno-Sanchez, B.J. Allen, and G. RedShirt Tyon (2020), Bridging cultures for management and conservation of natural resources, ED016-06, Fall Meeting, American Geophysical Union, online, December 1-17, 2020.

35. **Mont-Eton, M.E.** and D.C. Mays (2020), Application of Laplace equation to derive hydraulic conductivity from velocity measurements in porous media, Annual Meeting, International Society for Porous Media, online, August 31-September 4, 2020.

34. Mays, D.C., T.M. Roane, R. Moreno, R. RedShirt Tyon, and B.J. Allen (2019), Extracurricular experiences bring Indigenous perspectives to students of biology, civil engineering, and environmental science, PA44B-04, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2019.

33. **Sather, L.J.**, **E.J. Roth**, J.P. Crimaldi, R.M. Neupauer, and D.C. Mays (2019), How plume interfaces, velocity fields, and heterogeneity structures interact to enhance mixing and reaction, H53D-06, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2019.

32. Neupauer, R.M., L.J. Reising, E.J. Roth, J.P. Crimaldi, and D.C. Mays (2019), Laboratory and numerical investigation of active spreading, mixing, and reaction in porous media, MODFLOW and More 2019, International Ground Water Modeling Center, Golden, Colorado, June 2-5, 2019.

31. Neupauer, R.M., L.J. Reising, D.C. Mays, J.P. Crimaldi, E.J. Roth (2019), Using passive spreading by aquifer heterogeneity to inform the design of active spreading systems for in situ groundwater remediation, World Environmental and Water Resources Congress, American Society of Civil Engineers, Pittsburgh, Pennsylvania, June 19-23, 2019.

30. Mays, D.C. and T.M. Roane (2018), Environmental Stewardship of Indigenous Lands: New certificate, new curriculum, new culture in STEM education, STEAMposium, University of Colorado Denver, Denver, Colorado, October 12, 2018.

29. Neupauer, R.M., **S.C. Waers**, J.R. Kasprzyk, and D.C. Mays (2018), Monitoring design for in situ remediation of contaminated groundwater using engineered injection and extraction, World Environmental and Water Resources Congress, American Society of Civil Engineers, Minneapolis, Minnesota, June 3-7, 2018.

28. **Greene, J.A.**, R.M. Neupauer, M. Ye, J.R. Kasprzyk, D.C. Mays, and G.R. Curtis (2017), Bioremediation of uranium-contaminated groundwater using engineered injection and extraction, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 11-15, 2017.

27. **Zivkovich, B.R.**, **J. La**, T.M. Roane, and D.C. Mays (2017), Future challenges of bulkheads in acid mine drainage remediation, Mountain States Regional Conference, International Erosion Control Association, Denver, Colorado, November 16, 2017.

26. **Chinnasamy, C.V.**, **W.C. McIntyre**, and D.C. Mays (2016), Analysis of free river in the South Platte River for groundwater modeling in alluvial aquifer storage and recovery system, 71st Annual Meeting, Rocky Mountain Hydrologic Research Center, Ft. Collins, Colorado, November 18, 2016.

25. **Pearson, C.J.**, D.C. Mays, and I. Pal (2016), The sustainability of phytoremediation and monitored natural attenuation, a case study, BP Former Amoco Refinery, Sugar Creek, Missouri, Abstract #900, 109th Annual Conference and Exhibition, Air and Waste Management Association, New Orleans, Louisiana, June 20-23, 2016.

24. **Roth, E.J.**, **R.G. Tigera**, J.P. Crimaldi, and D.C. Mays (2015), Refractive index matching for planar laser-induced fluorescence imaging of fluid mixing in porous media, H54C-06, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2015.

23. **Jones, M.N.**, **R.G. Tigera**, D.C. Mays, and R.M. Neupauer (2014), Experiments on plume spreading by engineered injection and extraction, Fall Meeting, American Geophysical Union, San Francisco, California, December 15-19, 2014.

22. MacDonald, L., K. Sagendorf, H. Barker, L. Chavez, E. Grassi, R. Hyman, M. Lawrence, E. Lourenco de Freitas, D.C. Mays, J. Reyes, J. Rother, J. Sandoval, E. Santillano, and J. Sweet, (2014), Meaningful engagement with diversity: Cultural competence in the 21st-century classroom, Teacher-Scholar Forum, Metropolitan State University of Denver, Denver, Colorado, March 14, 2014.

21. Mays, D.C. (2013), One-week introduction to stochastic groundwater modeling, 388-2, Annual Meeting, Geological Society of America, Denver, Colorado, October 27-30, 2013.

20. Neupauer, R.M., A. Chan Hilton, S.J. Burian, J.W. Lauer, P.P. Mathisen, D.C. Mays, J.W. Nicklow, M.S. Olson, B.L. Ruddell, and A. Sciortino (2013), *$H_2Oh!$*: Collection of classroom demonstrations and activities for improving student learning of water concepts, 388-5, Annual Meeting, Geological Society of America, Denver, Colorado, October 27-30, 2013.

19. **Roth, E.J.** and D.C. Mays (2013), Clogging by colloid deposits: Fluid velocity, ionic strength, and fractal dimension, 87th Colloid and Surface Science Symposium, American Chemical Society, Riverside, California, June 23-26, 2013.

18. Mays, D.C., R.M. Neupauer, and J.D. Meiss (2013), Using chaos in groundwater remediation, Conference on Mathematical and Computational Issues in the Geosciences, Society of Industrial and Applied Mathematics, Padua, Italy, June 17-20, 2013.

17. **Piscopo, A.N.**, J.R. Kasprzyk, R.M. Neupauer, and D.C. Mays (2013), Optimizing in situ groundwater remediation with engineered injection and extraction, Conference on Mathematical and Computational Issues in the Geosciences, Society of Industrial and Applied Mathematics, Padua, Italy, June 17-20, 2013.

16. Mays, D.C. (2013), Classroom demonstrations of water concepts in 15 minutes or less, Teacher-Scholar Forum, Metropolitan State University of Denver, Denver, Colorado, February 22, 2013.

15. Neupauer, R.M., D.C. Mays, J.D. Meiss and M.W. Wetterau (2012), Groundwater plume spreading by chaotic advection: Stretching, folding, and bifurcation, H34A-07, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

14. **Gedge, K.S.** and D.C. Mays (2012), Secondary Clarifier Performance and Weir Loading Rate: Statistical Analysis at the Metro Wastewater Reclamation District, Denver, Colorado, Joint Annual Conference, Rocky Mountain Water Environment Association and Rocky Mountain Section of the American Water Works Association, Copper Mountain, Colorado, September 9-12, 2012.

13. **Roth, E.J.** and D.C. Mays (2012), Linking colloid deposit morphology and clogging via fractal dimension, 86th Colloid and Surface Science Symposium, American Chemical Society, Baltimore, Maryland, June 10-13, 2012.

12. Neupauer, R.M. and D.C. Mays (2011), Chaotic advection, fluid spreading, and groundwater contaminant plumes, H23M-04, Fall Meeting, American Geophysical Union, San Francisco, California, December 5-9, 2011.

11. **Rhodes, E.P.**, Z.J. Ren and D.C. Mays (2011), Modeling zinc leaching from tire crumb rubber, 242nd National Meeting, American Chemical Society, Denver, Colorado, August 28–September 1, 2011.

10. **Piscopo, A.N.**, D.C. Mays, and R. M. Neupauer (2010), Contrasting advective spreading and dispersive mixing in groundwater, H54C-03, Fall Meeting, American Geophysical Union, San Francisco, California, December 13-17, 2010.

9. Mays, D.C. and R.M. Neupauer (2010), Innovative injection and extraction schemes to enhance mixing in aquifers, 274-2, Annual Meeting, Geological Society of America, Denver, Colorado, October 31-November 3, 2010.

8. Mays, D.C., **O.T. Cannon**, **A.W. Kanold**, **K.J. Harris**, T.C. Lei and B. Gilbert (2010), In situ measurement of the fractal dimension of colloid deposits in porous media, Hydrology Days, American Geophysical Union, Ft. Collins, Colorado, March 22-24, 2010.

7. Mays, D.C., **O.T. Cannon**, **A.W. Kanold**, **K.J. Harris**, T.C. Lei and B. Gilbert (2009), In situ measurement of the fractal dimension of colloid deposits in porous media, 83rd Colloid and Surface Science Symposium, American Chemical Society, New York, June 14-19, 2009.

6. **Dankenbring, S.C.** and D.C. Mays (2008), Effects of watershed subdivision, resolution of digital elevation model, and resolution of watershed properties in the Colorado Urban Hydrograph Procedure, 63rd Annual Meeting, Rocky Mountain Hydrologic Research Center, Ft. Collins, Colorado, 17 October 2008.

5. Mays, D.C. (2008), Graphical synthesis of colloid transport results on Quirk-Schofield diagrams, H21A-07, Joint Assembly, American Geophysical Union, Ft. Lauderdale, Florida, May 27-30, 2008.

4. Mays, D.C. and J.R. Hunt (2006), Clogging by montmorillonite in porous media: Hydrodynamic and chemical effects, Annual Meeting, American Institute of Chemical Engineers, San Francisco, California, November 12-17, 2006.

3. Mays, D.C. (2006), Clogging in filters and soils: Role of particle accumulation and deposit morphology, 80th Colloid and Surface Science Symposium, American Chemical Society, Boulder, Colorado, June 18-21, 2006.

2. Mays, D.C. and J.R. Hunt (2004), Hydrodynamic factors during particle clogging of porous media, 228th Annual Meeting, American Chemical Society, Philadelphia, Pennsylvania, August 22-26, 2004.

1. Mays, D.C. and J.R. Hunt (2003), Hydrodynamic factors in granular media clogging, Annual Meeting, American Institute of Chemical Engineers, San Francisco, California, November 16-21, 2003.

POSTER PRESENTATIONS

79. **Fager, B.E.**, D.C. Mays, and R.M. Neupauer (2025), Spatial Poincaré sections as a tool to reveal advective structure and chaotic behavior, Annual Meeting, American Geophysical Union, New Orleans, Louisiana, December 15-19, 2025.

78. **Fahrney, E.E.**, D.C. Mays, and C.P. Newman (2025), Novel methodology for prioritizing wells for groundwater monitoring in the Arkansas Headwaters Basin, Annual Meeting, American Geophysical Union, New Orleans, Louisiana, December 15-19, 2025.

77. Mays, D.C., A.M. Agogino, K. Chief, R. Moreno-Sanchez, C. Rice, and T.M. Roane (2025), Community creation of the Native Food, Energy, and Water Systems (FEWS) Certificate, Annual Meeting, American Geophysical Union, New Orleans, Louisiana, December 15-19, 2025.

76. Velez, C., **K. Diaz-Sanders**, and D.C. Mays (2025), Meet our moment: Engineering can work for everyone, 2nd Annual Colorado Hispanic-Serving Institutions (HSI) Summit, Colorado Mountain College, Glenwood Springs, Colorado, September 11-12, 2025.

75. **Fager, B.E.**, **M. Manfre Sarno**, R.M. Neupauer, and D.C. Mays (2025), Can steady helical flow in porous media generate chaotic advection? Dynamics Days, Denver, Colorado, January 3-5, 2025.

74. **Fager, B.E.**, **M. Manfre Sarno**, R.M. Neupauer, and D.C. Mays (2024), Exploring chaotic signatures of helical flow within porous media, H23K-1143, Annual Meeting, American Geophysical Union, Washington, DC, December 9-13, 2024.

73. Mays, D.C., T. Altman, M. Darbeheshti, K.A. Goodman, M. Evans, and H.L. Johnson (2024), Nudging engineering faculty for inclusive teaching, Engineering Education and Centers (EEC) Grantees Conference, U.S. National Science Foundation, Alexandria, Virginia, September 11-12, 2024.

72. Mays, D.C., R.M. Neupauer, S.T. Potter, J.J. Wahlberg, and M. Killingstad (2024), Bust a move: Can the dynamic dance of pumping and reinjection accelerate PFAS removal? Thirteenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Battelle Memorial Institute, Denver, Colorado, June 2-6, 2024.

71. Mays, D.C., M. Darbeheshti, T. Altman, K.A. Goodman, H.L. Johnson, and M. Evans (2024), Nudging engineering faculty to adopt known best practices for inclusive teaching: Motivation, strategy, and what's next, Collaborative Network for Engineering and Computing Diversity (CoNECD), Arlington, Virginia, February 25-27, 2024.

70. Mays, D.C. and **L.M. Benson** (2023), Estimating snowpack infiltration from soil moisture time series with splines, H51K-1239, Fall Meeting, American Geophysical Union, San Francisco, California, December 11-15, 2023.

69. Mays, D.C., **C. Rice**, C. Velez, and T.M. Roane (2023), Student narratives from the first five years of Environmental Stewardship of Indigenous Lands, SY21B-0820, Fall Meeting, American Geophysical Union, San Francisco, California, December 11-15, 2023.

68. **Grote, M.E.** and D.C. Mays (2022), Experimental study of the relationship between porous media clogging and dynamic permeability, H25P-1300, Fall Meeting, American Geophysical Union, Chicago, Illinois, December 12-16, 2022.

67. **Humphreys, K.M.** and D.C. Mays (2022), Sediment trend analysis on the South Fork Clearwater River, Idaho County, Idaho, USA: Land management impact and participant perspectives, H15U-1040, Fall Meeting, American Geophysical Union, Chicago, Illinois, December 12-16, 2022.

66. **Benson, W.L., R.G. Tigera,** and D.C. Mays (2022), Proof-of-principle experiments on thermally enhanced plume spreading, H25P-1297, Fall Meeting, American Geophysical Union, Chicago, Illinois, December 12-16, 2022.

65. Mays, D.C., R. Moreno-Sanchez, and T.M. Roane (2022), Scholarships and certificates for stewardship of Indigenous land, 2022 Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) Symposium, U.S. National Science Foundation, Washington, DC, September 29-October 1, 2022.

64. Mays, D.C., M. Darbeheshti, T. Altman, K. Goodman, H.L. Johnson, and M. Evans (2022), Nudging new engineering faculty toward best practices for equity and inclusion, Engineering Education and Centers (EEC) Grantees Conference, U.S. National Science Foundation, Arlington, Virginia, September 22-23, 2022.

63. Roane, T.M., D.C. Mays, R. Moreno-Sanchez, G. RedShirt Tyon, and B.J. Allen (2022), Opening liaison careers for Indigenous students in the environmental sciences: Environmental Stewardship of Indigenous Lands (ESIL) certificate, Geoscience Alliance 5: Data in Indian Country, University of Minnesota, Minneapolis, Minnesota, July 28-31, 2022.

62. **Sather, L.J., E.J. Roth,** J.P. Crimaldi, R.M. Neupauer, and D.C. Mays (2022), Hydraulic building blocks for enhanced groundwater remediation, Twelfth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Battelle Memorial Institute, Palm Springs, California, May 22-26, 2022.

61. **Benson, L.M.** and D.C. Mays (2021), Estimating snowmelt infiltration with soil moisture time series, C15D-0821, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 13-17, 2021.

60. **Rice, C.** and D.C. Mays (2021), Can we teach fluid mechanics without teaching oppression? SY55B-0347, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 13-17, 2021.

59. **Roth, E.J.**, R.M. Neupauer, J.P. Crimaldi, D.C. Mays, and **L.J. Sather** (2021), Experiments and simulations of reversible Fickian dispersion in periodic radial subsurface flow, H45Q-1370, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 13-17, 2021.

58. **Woods, M.L.** and D.C. Mays (2021), Modeling bioretention with sustainable porous media using Storm Water Management Model (SWMM), H35F-1091, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 13-17, 2021.

57. **La, J.**, D.C. Mays, and T.M. Roane (2020), Assessing biological toxicity of acid mine drainage using bacterial environmental DNA, B033-0001, Fall Meeting, American Geophysical Union, online, December 1-17, 2020.

56. **Roth, E.J.**, R.M. Neupauer, **L.J. Sather**, D.C. Mays, and J.P. Crimaldi (2020), Reversible dispersion in periodic radial subsurface flow, H035-0010, Fall Meeting, American Geophysical Union, online, December 1-17, 2020.

55. **Sather, L.J.**, R.M. Neupauer, **E.J. Roth**, J.P. Crimaldi, and D.C. Mays (2020), Engineering groundwater remediation by active plume spreading, H031-0012, Fall Meeting, American Geophysical Union, online, December 1-17, 2020.

54. Neupauer, R.M. **E.J. Roth**, **L.J. Sather**, J.P. Crimaldi, and D.C. Mays (2019), Spreading, mixing, and reaction in periodic radial subsurface flow, H53R-2069, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2019.

53. **Roth, E.J.**, R.M. Neupauer, D.C. Mays, **L.J. Sather**, and J.P. Crimaldi (2019), Validation of wall effect mitigation techniques for porous media experiments, H33N-2204, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2019.

52. Roane, T.M., B.J. Allen, D.C. Mays, R. Moreno, and G. RedShirt Tyon (2019), Network for education and employment in environmental stewardship of Indigenous lands, NSF INCLUDES National Network Convening, U.S. National Science Foundation, Alexandria, Virginia, May 29-30, 2019.

51. Mays, D.C., T.M. Roane, R. Moreno, G. RedShirt Tyon, and B.J. Allen (2018), Technical and cultural education on environmental stewardship of Indigenous lands, Fall Meeting, American Geophysical Union, Washington, D.C., December 10-14, 2018.

50. **Reising, L.**, R.M. Neupauer, D.C. Mays, J.P. Crimaldi, and **E.J. Roth** (2018), Effects of active and passive spreading on mixing and reaction during groundwater remediation by engineered injection and extraction, Fall Meeting, American Geophysical Union, Washington, D.C., December 10-14, 2018.

49. **Roth, E.J.**, J.P. Crimaldi, D.C. Mays, R.M. Neupauer, and **Reising, L.** (2018), Laboratory simulations of engineered injection and extraction in porous media using laser-induced fluorescence, Fall Meeting, American Geophysical Union, Washington, D.C., December 10-14, 2018.

48. **Coughlin, J.P.**, H.L. Johnson, and D.C. Mays (2018), Genetic decomposition: How do students learn to turn concepts into relationships?, Zone IV Conference, American Society for Engineering Education, Boulder, Colorado, March 25-27, 2018.

47. Roane, T.M., B.J. Allen, D.C. Mays, R. Moreno, G. RedShirt Tyon, and C. Velez (2018), Building a network for education and employment in environmental stewardship of Indigenous lands (ESIL), NSF INCLUDES Awardees and Evaluators Meeting, U.S. National Science Foundation, Alexandria, Virginia, January 10-12, 2018.

46. Mays, D.C., V.L. Freedman, S.K. White, Y. Fang, and R.M. Neupauer (2017), Linking chaotic advection with subsurface biogeochemical processes, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 11-15, 2017.

45. **Reising, L.J.**, R.M. Neupauer, and D.C. Mays (2017), Estimating mixing and reaction in porous media using a flow-based metric incorporating dispersion, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 11-15, 2017.

44. **Roth, E.J.**, D.C. Mays, R.M. Neupauer, and J.P. Crimaldi (2017), Quantification and control of wall effects in porous media experiments, Fall Meeting, American Geophysical Union, New Orleans, Louisiana, December 11-15, 2017.

43. **La, J.**, **B.R. Zivkovich**, D.C. Mays, and T.M. Roane (2017), Biological toxicity related to hydrogeochemical effects of mine bulkheads, Fall Meeting, Rocky Mountain Branch, American Society for Microbiology, Denver, Colorado, November 11, 2017.

42. **Coughlin, J.P.** and D.C. Mays (2016), Classroom activities to make aquifers transparent, Fall Meeting, American Geophysical Union, San Francisco, California, December 12-16, 2016.

41. **Reising, L.J.**, Neupauer, R.M., and D.C. Mays (2016), Relative contributions of heterogeneity and imposed time-varying flows on spreading and contaminant degradation in groundwater, Fall Meeting, American Geophysical Union, San Francisco, California, December 12-16, 2016.

40. **Roth, E.J.**, D.C. Mays, and J.P. Crimaldi (2016), Experimental methods for observation of mixing in refractive index matched porous media, Fall Meeting, American Geophysical Union, San Francisco, California, December 12-16, 2016.

39. **Mont-Eton, M.E.**, **E.J. Roth**, T.C. Lei, B. Gilbert, and D.C. Mays (2015), How to measure fractal colloid deposits in porous media, H21A-1332, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2015.

38. **Sanchez II, N.** and D.C. Mays (2015), How much leakage renders the greenhouse gas footprint of natural gas equivalent to coal?, A43F-0341, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2015.

37. **Tigera, R.G.**, **E.J. Roth**, R.M. Neupauer, and D.C. Mays (2015), The solution to pollution is distribution: Design your own chaotic flow, H51F-1427, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2015.

36. **Zivkovich, B.R.** and D.C. Mays (2015), Evaluating urbanization impacts from non-point stormwater runoff using geospatial analysis, H11F-1404, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2015.

35. **Roth, E.J.**, B. Gilbert, and D.C. Mays (2014), Size and fractal dimension of colloid deposits in model porous media, H31C-0634, Fall Meeting, American Geophysical Union, San Francisco, California, December 15-19, 2014.

34. Mays, D.C., **E.J. Roth**, and B. Gilbert (2014), Self-organization, emergence, and fractal dimension of colloid deposits in model soils, Complex Soil Systems Conference, Lawrence Berkeley National Laboratory, Berkeley, California, September 3-5, 2014.

33. **Jones, M.N.**, D.C. Mays, and R.M. Neupauer (2014), Plume spreading by chaotic advection: Simulations and experiments, Annual Meeting, International Society for Porous Media (InterPore), Milwaukee, Wisconsin, May 27-30, 2014.

32. **Accardo, M.P.**, R.M. Neupauer, J.D. Meiss, and D.C. Mays (2013), Spreading of three-dimensional plumes in two-dimensional chaotic flows in groundwater, H31D-1199, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2013.

31. **Foster, M.T.**, **M.N. Jones**, D.C. Mays, and R.M. Neupauer (2013), Hele-Shaw experiments on plume stretching and folding, H31D-1208, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2013.

30. Mays, D.C. (2013), Clogging in managed aquifer recharge: Hydrodynamics and geochemistry, H11F-1216, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2013.

29. Neupauer, R.M., **J.P. Brodt**, and D.C. Mays (2013), Engineered injection and extraction for remediation of sorbing solutes in groundwater, H41H-1333, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2013.

28. **Roth, E.J.** and D.C. Mays (2013), Colloid deposit morphology and clogging in aquifers, reservoirs, filters, and reactors: New insights through categorization with fractal dimension, H13B-1327, Fall Meeting, American Geophysical Union, San Francisco, California, December 9-13, 2013.

27. **Accardo, M.P.**, R.M. Neupauer, J.D. Meiss, and D.C. Mays (2013), Chaotic advection and contaminant degradation during engineered injection and extraction in heterogeneous porous media, 247-66, Annual Meeting, Geological Society of America, Denver, Colorado, October 27-30, 2013.

26. Chan Hilton, A., R.M. Neupauer, S.J. Burian, J.W. Lauer, P.P. Mathisen, D.C. Mays, M.S. Olson, C.A. Pomeroy, B.L. Ruddell, and A. Sciortino (2013), H_2Oh! Classroom demonstrations and activities for improving student learning of water concepts, World Environmental and Water Resources Congress, American Society of Civil Engineers, Cincinnati, Ohio, May 19-23, 2013.

25. **Krauss, E.D.** and D.C. Mays (2013), A new look at the Kozeny-Carman equation when applied to formation damage, Emerging Engineers Conference, Gulf Coast Section, Society of Petroleum Engineers, Houston, Texas, May 17, 2013.

24. **Roth, E.J.**, J. Ajo-Franklin, T.C. Lei, B. Gilbert, and D.C. Mays (2013), Colloid deposit morphology and permeability of porous media, Terrestrial Ecosystem Science/Subsurface Biogeochemical Research, Joint Investigators Meeting, Potomac, MD, May 14-15, 2013.

23. Chan Hilton, A., R.M. Neupauer, S.J. Burian, J.W. Lauer, P.P. Mathisen, D.C. Mays, M.S. Olson, C.A. Pomeroy, B.L. Ruddell, and A. Sciortino (2012), H_2Oh! Classroom demonstrations and activities for improving student learning of water concepts, ED11C-0743, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

22. **Dankovich, L.J.**, D.C. Mays and R.M. Neupauer (2012), An interactive software tool for examining the effect of well placement and pumping rate on reaction fronts for in situ remediation, H43E-1401, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

21. **Jones, M.N.**, D.C. Mays and R.M. Neupauer (2012), Physical apparatus to demonstrate stretching and folding of contaminant/treatment solution in aquifers by extraction and injection, H43E-1408, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

20. **Krauss, E.D.** and D.C. Mays (2012), Introducing the bulking factor to quantify clogging in petroleum formation evaluation, V23D-2874, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

19. **Piscopo, A.N.**, R.M. Neupauer and D.C. Mays (2012), Spreading due to heterogeneity during engineered injection and extraction for in situ remediation of contaminated groundwater, H23B-1356, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

18. **Roth, E.J.**, **M.E. Mont-Eton** and D.C. Mays (2012) Linking colloid deposit morphology and clogging in porous media, H43E-1407, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

17. **Webber, B.D.**, R.M., Neupauer, **A.N. Piscopo** and D.C. Mays (2012), Engineered injection and extraction for enhanced in situ remediation of sorbing solutes in groundwater, H43E-1411, Fall Meeting, American Geophysical Union, San Francisco, California, December 3-7, 2012.

16. Neupauer, R.M., S. Burian, J.W. Lauer, P. Mathisen, D.C. Mays, C. Pomeroy, B. Ruddell, A. Sciortino and A. Chan Hilton (2012), Classroom demonstration activities for improving student learning of hydraulics and fluid mechanics concepts, World Environmental and Water Resources Congress, American Society of Civil Engineers, Albuquerque, New Mexico, May 20-24, 2012.

15. Chan Hilton, A., J.W. Lauer, D.C. Mays, M. Olson, B. Ruddell, A. Sciortino and R.M. Neupauer (2012), Classroom demonstration activities for improving student learning of surface water concepts, World Environmental and Water Resources Congress, American Society of Civil Engineers, Albuquerque, New Mexico, May 20-24, 2012.

14. Neupauer, R.M., A. Chan Hilton, D.C. Mays, M. Olson, B. Ruddell, P. Mathisen and A. Sciortino (2012), Classroom demonstration activities for improving student learning of

groundwater concepts, World Environmental and Water Resources Congress, American Society of Civil Engineers, Albuquerque, New Mexico, May 20-24, 2012.

13. Mays, D.C., **E.J. Roth**, T.C. Lei, J.B. Ajo-Franklin, and B. Gilbert (2012), Colloids, deposits, and clogging in groundwater remediation, Subsurface Biogeochemical Research Program, Principal Investigator Meeting, Washington, DC, April 30-May 2, 2012.

12. **Piscopo, A.N.**, D.C. Mays and R.M. Neupauer (2011), Developing injection/extraction schemes to enhance mixing in groundwater for improved in-situ remediation, H31E-1214, Fall Meeting, American Geophysical Union, San Francisco, California, December 5-9, 2011.

11. **Fuller, K.**, R.M. Neupauer and D.C. Mays (2011), Genetic algorithm optimization of injection and extraction patterns for in-situ remediation of groundwater, MODFLOW and More 2011, International Ground Water Modeling Center, Golden, Colorado, June 5-8, 2011.

10. **Rhodes, E.P.**, Z.J. Ren, and D.C. Mays (2010), Zinc leaching from tire crumb rubber, B51D-0387, Fall Meeting, American Geophysical Union, San Francisco, California, December 13-17, 2010.

9. Mays, D.C., **O.T. Cannon**, **A.W. Kanold**, **K.J. Harris**, T.C. Lei and B. Gilbert (2009), In situ measurement of deposit morphology in porous media by static light scattering, H43B-1020, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2009.

8. Neupauer, R.M and D.C. Mays (2009), Injection and extraction schemes to enhance mixing in groundwater, H41D-0925, Fall Meeting, American Geophysical Union, San Francisco, California, December 14-18, 2009.

7. **Coughlin, J.P.** and D.C. Mays (2008), Infiltration and clogging with pervious concrete pavement, Hydrology Days, American Geophysical Union, Ft. Collins, Colorado, March 26-28, 2008.

6. Mays, D.C., T.L. Oreskovic, P.S. Rice, and N. Varaksa (2006), Environmental impact of nanotechnology: Current understanding and future research, Grand Opening of the Nanomaterials Characterization Facility, University of Colorado, Boulder, Colorado, 16 November 2006.

5. Mays, D.C. (2005), Contrasting clogging in soils and granular media filters, H31F-1358, Fall Meeting, American Geophysical Union, San Francisco, California, December 5-9, 2005.

4. Mays, D.C. (2005), Environmental transport of engineered nanoparticles: Importance and potential for research collaboration, CU-NIST Fall Symposium, Boulder, Colorado, November 14, 2005.

3. Mays, D.C. and J.R. Hunt (2004), Hydrodynamics and long-term permeability evolution in clogging porous media, H11E-0337, Fall Meeting, American Geophysical Union, San Francisco, California, December 13-17, 2004.

2. Mays, D.C. and J.R. Hunt (2003), Fluid velocity, particle penetration and permeability reduction in clogging porous media, H41D-1023, Fall Meeting, American Geophysical Union, San Francisco, California, December 8-12, 2003.

1. Hunt, J.R. and D.C. Mays (2001), Episodic particle dynamics in the subsurface, H42C-0368, Fall Meeting, American Geophysical Union, San Francisco, California, December 10-14, 2001.

SEMINARS PRESENTED

INTERNATIONAL

7. Chaotic advection in porous media: Dimensionality, scaling, and engineering (INVITED), Earth Center of Northern Bavaria Earth Science Colloquium, Friedrich Alexander University, Erlangen, Germany, July 16, 2025.

6. Building momentum towards change through peer-level impact (with Kaveh Sheikhrezaei), AMPLIFY Special Session, American Society for Engineering Education, Montreal, Canada, June 23, 2025.

5. Out of chaos comes engineered injection and extraction (INVITED), Istanbul Technical University, Department of Environmental Engineering, Istanbul, Türkiye, July 25, 2023.

4. Chaotic advection by engineered injection and extraction, School of Engineering and Technology, University of Hertfordshire, England, September 8, 2017.

3. Methane leakage and the greenhouse gas footprint of natural gas, Department of Chemical Engineering and Biotechnology, University of Cambridge, England, September 7, 2017.

2. Linking colloidal phenomena and permeability in porous media, University of New South Wales, School of Civil and Environmental Engineering, Sydney, Australia, December 10, 2015.

1. Methane leakage and the greenhouse gas footprint of natural gas, University of Sydney, School of Geosciences, Thinking Space Seminar, Sydney, Australia, December 9, 2015.

NATIONAL

8. Engineering servingness: Discover, dream, design (with Christine Velez), AMPLIFY Showcase, University of Texas at El Paso, May 7, 2025.

7. Nudging new engineering faculty for inclusive teaching, Engineering Education and Centers (EEC) Grantees Conference, U.S. National Science Foundation, Alexandria, Virginia, September 11-12, 2024.

6. Chaotic advection for groundwater remediation: Simulations, experiments, and (future) field tests, Pacific Northwest National Laboratory, Richland, Washington, June 19, 2017.

5. Chaotic advection and reactive transport in alluvial aquifers, Rifle Science Community Teleconference, Sustainable Systems Science Focus Area (SFA) 2.0, Lawrence Berkeley National Laboratory, Berkeley, California, March 8, 2016.

4. Groundwater, fractals, and chaos, Portland State University, Department of Geology, Portland, Oregon, February 25, 2014.

3. Thinking about porous media: Grape Nuts, fractals, and chaos, California State University East Bay, Department of Engineering, Hayward, California, January 21, 2014.

2. Groundwater, fractals, and chaos, San Diego State University, Department of Civil, Construction, and Environmental Engineering, San Diego, California, May 10, 2013.

1. Water, nanoparticles, lasers, and fractals, University of Wyoming, Environmental Engineering Seminar, Laramie, Wyoming, March 21, 2011.

COLORADO

16. Reactive transport, dynamic permeability, and feedback (INVITED), University of Colorado Boulder, Boase Hydrologic Sciences and Water Resources Engineering Seminar Series, Boulder, Colorado, October 23, 2024.

15. Oil spill and water flush, Metropolitan State University of Denver, Environmental Engineering Program, Denver, Colorado, May 3, 2022.

14. Chaotic advection: Rethinking aquifers as porous media reactors, Colorado School of Mines, Environmental Seminar Series, Golden, Colorado, April 19, 2019.

13. Uranium, groundwater, supercomputing, and chaos, University of Colorado Boulder, Hydrologic Sciences and Water Resources Engineering Seminar, Boulder, Colorado, January 24, 2018.

12. Methane leakage and the greenhouse gas footprint of natural gas, Colorado Oil and Gas Conservation Commission, Denver, Colorado, February 15, 2017.

11. Introduction to hydrology and hydraulics, CU South Denver, Mini Engineering School for Civil Engineering, February 1, 2017.

10. Plume spreading for improved groundwater remediation, Colorado Ground Water Association, Monthly Meeting Presentation, Denver, Colorado, March 18, 2015.

9. Methane leakage and the carbon footprint of electricity from natural gas, University of Colorado Boulder, Sustainability Research Network Seminar, Boulder, Colorado, November 5, 2014.

8. Simple chaos, Regis University, Honors Program, Denver, Colorado, March 12, 2014.

7. Reactors with non-ideal flow, University of Colorado Boulder, Environmental Engineering Program, Boulder, Colorado, October 29, 2013.

6. Advanced wastewater treatment and sludge management, University of Colorado Boulder, Environmental Engineering Program, Boulder, Colorado, October 28, 2013.

5. Fractals, chaos... and groundwater, University of Colorado Boulder, Hydrologic Sciences and Water Resources Engineering Seminar, Boulder, Colorado, February 15, 2012.

4. Clogging in porous media—A little clay goes a long way, U.S. Geological Survey, National Research Program, Lakewood, Colorado, May 15, 2007.

3. Clogging in porous media—A little clay goes a long way, University of Colorado at Boulder, Hydrology, Water Resources, and Environmental Fluid Mechanics Seminar, Boulder, Colorado, April 25, 2007.

2. Differential equations, contaminant transport, and public welfare, Colorado College, Department of Mathematics and Computer Science, Fearless Friday Seminar, Colorado Springs, Colorado, February 2, 2007.

1. Hydrodynamics and clogging in soils, filters and membranes, Colorado School of Mines, Environmental Science and Engineering Seminar Series, Golden, Colorado, April 6, 2006.

LOCAL

8. What Is working for Hispanic engineering students: An update from the Engineering HSI grand challenge team (with Karl Diaz-Sanders, Katherine A. Goodman, and Bridget Nuechterlein), University of Colorado Denver, Inclusive Excellence Network, February 4, 2025.

7. Inspiration, innovation, and iteration: Engineering chaos into groundwater remediation, University of Colorado Denver, Department of Civil Engineering, May 22, 2023.

6. Out of chaos comes engineered injection and extraction, University of Colorado Denver, Engineering Seminar, Denver, Colorado, March 7, 2023.

5. Faculty Learning Community ENNTICE; University of Colorado Denver; College of Engineering, Design and Computing; Education, Outreach, and Broader Impacts Grant Symposium, November 12, 2021.

4. Methane leakage and the greenhouse gas footprint of natural gas, University of Colorado Denver, Engineering Seminar, Denver, Colorado, November 3, 2015.

3. Classroom demonstration activities for improving student learning of hydraulics and fluid mechanics concepts, University of Colorado Denver, Math and Science Learning and Education Consortium, STEM Education Symposium, Denver, Colorado, October 25, 2012.

2. Fractals, chaos... and groundwater, University of Colorado Denver, Engineering Seminar, Denver, Colorado, September 19, 2012.

1. From colored chalk to Bloom's taxonomy, University of Colorado Denver, Faculty Development Center, Denver, Colorado, April 2, 2008 and March 19, 2009.

PROFESSIONAL ORGANIZATIONS

American Geophysical Union, member 1999-present
American Society for Engineering Education, member 2023-present
American Society of Civil Engineers, member 1993-present
Association of Environmental Engineering and Science Professors, member 2005-present
Colorado Ground Water Association, member 2013-present
International Society for Porous Media (InterPore), member 2014-present

COURSES TAUGHT

UNDERGRADUATE COURSES

CVEN-3313, Fluid Mechanics (http://www.ucdenver.edu/dmays/3313)
CVEN-3414, Water Supply and Distribution Systems (http://www.ucdenver.edu/dmays/3414)
CVEN-4426, Pipe Network and Sewer Design (http://engineering.ucdenver.edu/dmays/4426)

GRADUATE COURSES

CVEN-5333, Surface Water Hydrology (http://www.ucdenver.edu/dmays/5333)
CVEN-5334, Groundwater Hydrology (http://www.ucdenver.edu/dmays/5334)
CVEN-5335, Vadose Zone Hydrology (http://www.ucdenver.edu/dmays/5335)
CVEN-5426, Pipe Network and Sewer Design (http://engineering.ucdenver.edu/dmays/5426)

LEADERSHIP and SERVICE

EXTERNAL

Manuscript Referee for *Environmental Research, European Physical Journal E, Geophysical Research Letters, Groundwater Monitoring and Remediation*, *Heliyon*, *Hydrogeology Journal, Journal of Contaminant Hydrology, Journal of Diversity in Higher Education, Journal of Hydrology, Soft Matter, Sustainability, Transport in Porous Media, Water,* and *Water Resources Research* (since 2020/21).

Student Poster Judge, annual meeting, American Geophysical Union, 2023-present.

Student Poster Judge, biannual meeting, Association of Environmental Engineering and Science Professors, 2025.

Promotion Reviewer, for faculty applying for promotion at peer institutions, 2020-2024.

Proposal Reviewer, U.S. National Science Foundation, 2006-2024.

Proposal Reviewer, U.S. Department of Defense, 2020.

Session Convener, Natural and Engineered Chaotic Advection in Geophysical Flows (H23K), Annual Meeting, American Geophysical Union, Washington, DC, 9-13 December 2024.

Session Chair, Collaborative Network for Engineering and Computing Diversity (CoNECD), Arlington, Virginia, February 25-27, 2024.

External Member, Doctoral Exam Committee, Michelle Cho, “Chaotic advection for enhanced reagent mixing” (advisor Neil Thomson), University of Waterloo, Ontario, Canada, 2019.

Session Chair, Zone IV Conference, American Society for Engineering Education, Boulder, Colorado, March 25-27, 2018.

Member, Excellence in Water Resources Education Committee, Environmental and Water Resources Institute, American Society of Civil Engineers, 2008-2013.

Session Chair, CP17—Groundwater Transport and Uncertainty (organized by M. Kern and M. Putti), Conference on Mathematical and Computational Issues in the Geosciences, Society of Industrial and Applied Mathematics, Padua, Italy, June 17-20, 2013.

Session Chair, Environmental Aspects (organized by K.L. Chen and W.P. Johnson), 86th Colloid and Surface Science Symposium, American Chemical Society, Baltimore, MD, June 10-13, 2012.

Session Chair, Emerging Issues and Solutions for Sustainable Water and Wastewater Systems (organized by Z.J. Ren), 242nd National Meeting, American Chemical Society, Denver, Colorado, August 28-September 1, 2011.

Co-Host, Distinguished Lecturer Series, Association of Environmental Engineering and Science Professors (1) Tony Fane of the University of New South Wales, lecture at the Colorado School of Mines, February 18, 2009; (2) Richard Luthy of Stanford University, lecture at the University of Colorado Boulder, October 19, 2011.

Tutor, Colorado Association of Black Professional Engineers and Scientists, 2006-2007.

Donor, African Universities Book and Equipment Support Initiative, 2006-2007.

INTERNAL

Group Leader, Hydrologic, Environmental, and Sustainability Engineering (HESE) Graduate Track, Department of Civil Engineering, 2019-present.

Member, University Curriculum Committee, 2018-present.

Chair, Assessment Committee, Department of Civil Engineering, 2014-present.

Member, Excellence in Teaching Award Selection Committee, 2010, 2015, 2025.

Host, Engineering Seminar by Ebony Omotola McGee, “Black Brown Bruised: How Racialized STEM Education Stifles Innovation,” College of Engineering, Design and Computing, 2021.

Reviewer, Interfolio Implementation Project, for annual faculty reviews, University of Colorado Denver, 2020.

Member, Standing Review Committee, Office of Research Services, 2016-2019.

Faculty Advisor, Student Chapter, American Society of Civil Engineers, 2012-2019.

Chair, Graduate Admissions Committee, Department of Civil Engineering, 2006-2019.

Chair, Ad Hoc Committee on Performance Criteria for Clinical Teaching Track Faculty, College of Engineering and Applied Science, 2013-2015.

Laboratory Coordinator, Environmental and Water Resources Laboratory, Department of Civil Engineering, 2005-2014.

Member, Accreditation Board for Engineering and Technology (ABET) Best Practices Committee, College of Engineering and Applied Science, 2011-2012, 2013-2014, 2015-2016.

Member, Faculty Search Committee, Department of Civil Engineering: Environmental Engineering 2007-2008; Civil Infrastructure Systems 2011-2012; Structural Engineering 2012-2013.

Member, Summer Initiatives Group, 2012-2013.

Member, Scholarship Committee, College of Engineering and Applied Science, 2012-2013.

Member, Faculty Development Grant Selection Committee, 2011.

Program Leader, Environmental and Sustainability (E&S) Graduate Track, Department of Civil Engineering, 2007-2009.

AWARDS and HONORS

Charles O'Melia Distinguished Educator Award, Association of Environmental Engineering and Science Professors, 2025.

Campus-Wide Faculty Award for Inclusive Excellence, University of Colorado Denver, 2025.

Campus-Wide Faculty Award for Excellence in Teaching, University of Colorado Denver, 2024.

Excellence in Service and Leadership, University of Colorado Denver, College of Engineering and Applied Science, 2017.

Outstanding Faculty Advisor, Region 7, American Society of Civil Engineers, 2016.

Outstanding Faculty in Teaching, University of Colorado Denver, College of Engineering and Applied Science, 2014.

Excellence in Teaching Award, University of Colorado Denver, College of Engineering and Applied Science, 2009.

Office of Civilian Radioactive Waste Management Fellowship, U.S. Department of Energy, 2000-2004.

Outstanding Graduate Student Instructor, University of California Berkeley, 2000.

Jane Lewis Fellowship, University of California Berkeley, 1998-1999.

Sydney Shore Memorial Prize, University of Pennsylvania, 1995.[6]

[6] For desire, aptitude, and ability to apply civil engineering principles to the solution of socially relevant issues.

Tau Beta Pi, Pennsylvania Delta Chapter, 1994.

TO ADVISEES

Outstanding Doctoral Student to Joseph “Patrick” Coughlin, Department of Civil Engineering, University of Colorado Denver, 2025.

Harlan Erker Memorial Scholarship to Eleanor Fahrney, Colorado Ground Water Association, 2024.

Rich Herbert Memorial Scholarship to Eleanor Fahrney, Colorado Section, American Water Resources Association, 2024.

Outstanding Doctoral Student to Michael Mont-Eton, Department of Civil Engineering, University of Colorado Denver, 2023.

Outstanding Graduate Student to Steven Klawitter, Department of Civil Engineering, University of Colorado Denver, 2022.

Graduate School Diversity, Equity, and Inclusion Award to graduate student Cynthia Rice, University of Colorado Denver, 2021.

Online Teaching Fellowship to graduate student Cynthia Rice, Graduate School, University of Colorado Denver, 2020.

Civil Engineering Scholarship to undergraduate student Michael “Alex” McPherson, Southern Colorado Branch, American Society of Civil Engineers, 2019.

Younger Members Group Scholarship to undergraduate student Michael "Alex" McPherson, Denver Branch, Colorado Section, American Society of Civil Engineers, 2019.

Jaqueline Arcaris Civil Engineering Scholarship to undergraduate student Philip Taylor, Colorado Section, American Society of Civil Engineers, 2018.

Younger Members Group Scholarship to undergraduate student Todd Santee, Colorado Section, American Society of Civil Engineers, 2016.

Carl Kisslinger Graduate Student Award to graduate student Jennifer Chipman, Retired Faculty Association, University of Colorado, 2012-2013.

Outstanding Research and Creative Activity Award to graduate student Jennifer Chipman, University of Colorado Denver, 2012.

Outstanding Research and Creative Activity Award to graduate student Emily Rhodes, jointly advised with Z.J. Ren, University of Colorado Denver, 2010.

Outstanding Research and Creative Activity Award to graduate student Adam Kanold, University of Colorado Denver, 2008.