

Hoori Ajami

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Education

Ph.D., Hydrology and Water Resources, minor in Remote Sensing and Spatial Analysis

University of Arizona, Tucson, Arizona, USA, 2009

Dissertation: Quantifying Spatial and Temporal Variability of Mountain System Recharge and Riparian Evapotranspiration in Semi-Arid Catchments (*Advisor Thomas Maddock III*)

Certificate of Excellence in Geographic Information Science

University of Arizona, Tucson, Arizona, USA, 2007

M.Sc., Natural Resources Engineering (Environment)

University of Tehran, Tehran, Iran, 2002

B.Sc., Natural Resources Engineering (Environment)

Isfahan University of Technology, Isfahan, Iran, 2000

Employment History

July 2025-Present, Professor of Groundwater Hydrology, University of California Riverside, USA.

July 2021-June 2025, Associate Professor of Groundwater Hydrology, University of California Riverside, USA.

June 2016-June 2021, Assistant Professor of Groundwater Hydrology, University of California Riverside, USA.

June 2024 – Present, Thrust lead of AI in Natural and Agricultural Sciences: Agricultural, Environmental and Geospatial Sciences, UC Riverside Artificial Intelligence reSEarch (RAISE) Institute, University of California Riverside, USA.

October 2020-September 2022, Cooperating Faculty Member, Department of Chemical and Environmental Engineering, University of California Riverside, USA.

December 2019-Present, Affiliated Faculty, Energy, Economics, and Environment (E3) Research Center, University of California Riverside, USA.

September 2019-Present, Affiliated Faculty, Center for Research in Intelligent Systems, University of California Riverside, USA.

October 2017-Present, Affiliated Faculty, Center for Geospatial Sciences, University of California Riverside, USA.

January 2017-December 2019, Visiting Fellow, Water Research Center, School of Civil and Environmental Engineering, University of New South Wales Australia (to facilitate collaborations with postdocs and PhD students at UNSW).

June 2014-June 2016, Senior Research Associate, Water Research Center, School of Civil and Environmental Engineering, University of New South Wales Australia.

September 2012-May 2014, Senior Research Associate (National Center for Groundwater Research & Training), Connected Waters Initiative Research Center, School of Civil and Environmental Engineering, University of New South Wales Australia.

March 2010-September 2012, Post-Doctoral Research Associate (National Center for Groundwater Research & Training), Connected Waters Initiative Research Center, School of Civil and Environmental Engineering, University of New South Wales Australia.

January 2006- December 2009, Graduate Research Assistant, Department of Hydrology and Water Resources, University of Arizona.

January 2003-December 2005, Graduate Research Assistant, School of Natural Resources and the Environment, University of Arizona.

Teaching Experience

Department of Environmental Sciences, University of California Riverside, 2025, **ENSC 101: Water Resources** (*Lectures: The first introductory upper division course for water resources. Topics: Hydrologic cycle, Water Pollution, Drinking Water Regulations, Water Resources Sustainability*). Updated the existing course.

Department of Environmental Sciences, University of California Riverside, 2023, **ENSC 001: Introduction to Environmental Science: Natural Resources** (*Lectures: The first introductory course for Environmental Sciences major and a science course elective for other majors. Topics: Environmental Sustainability, Ecosystems and global elemental cycle, Urban environment, Human health*). Updated the existing course.

Department of Environmental Sciences, University of California Riverside, 2020, 2022, **ENSC 210: Integrated Hydrologic Modeling** (Co-developed and co-taught with Prof. J. Simunek) (*Lectures: fundamentals of hydrologic modeling, model optimization and sensitivity analysis, uncertainty analysis*).

Department of Environmental Sciences, University of California Riverside, 2018, 2019, 2020, 2021, 2022, 2023, 2025, **ENSC 175: Spatial Analysis and Remote Sensing for Environmental Sciences** (*Lectures: fundamentals of GIS, spatial interpolation, remote sensing concepts, image classification, geospatial modeling*). Developed a new course.

Department of Environmental Sciences, University of California Riverside, 2018, 2019, 2021, 2023, 2024, ENSC 165: Principles of Groundwater Science (*Lectures: fundamentals of groundwater science, surface water-groundwater interactions, pumping test analysis, contaminant transport*). Developed a new course.

Department of Environmental Sciences, University of California Riverside, 2017, GEO 132: Groundwater Geology (*Lectures: fundamentals of groundwater science, surface water-groundwater interactions, pumping test analysis*). Developed a new course.

Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 1, 2016, CVEN 9625: Fundamentals of Water Engineering (*Lectures: fundamentals of hydrology, flood frequency analysis, rainfall-runoff modeling*).

Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 2, 2015, CVEN 9612: Catchment and Water Resources Modeling (*Lectures: fundamentals of hydrologic modeling, flood routing, overview of semi-distributed and distributed hydrologic models, application of a new semi-distributed hydrologic model*).

Guest Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 2, 2014, CVEN 4501-9612: Catchment and Water Resources Modeling (*Lecture: Overview of semi-distributed and distributed hydrologic models*).

Guest Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 1, 2014, CVEN 3501: Water Resources Engineering (*Lecture: Application of GIS in catchment hydrology and introduction to hydrologic modeling*).

Course Administrator, School of Civil and Environmental Engineering, University of New South Wales, Semester 1, 2012, CVEN 3501: Water Resources Engineering. Performing all administrative duties of managing a large classroom (300+ students), working with BlackBoard online teaching tool and marking exams.

Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 2, 2011, CVEN 4501-9612: Catchment and Water Resources Modeling short course (*Topics: Catchment hydrology, conceptual rainfall-runoff models, flood routing models*).

Teaching Assistant, University of Arizona, Spring 2009, HWR 482-582: Applied Groundwater Modeling with MODFLOW.

Lab Instructor, University of Arizona, Fall 2004 and Fall 2005, RNR 417-517: Geographic Information Systems for Natural Resources (*Topics: Fundamentals of GIS and database development*).

Teaching Assistant, University of Arizona, Spring 2005, RNR419-519 lab: Cartographic Modeling (*Topics: Programming in GIS with Python, AML and Model Builder*).

Student Supervision

Undergraduate Students:

1. Jonathan Anderson (2009): (University of Arizona, Co-supervised with Prof. T. Meixner)
2. Zoe Southwell (2011): (UNSW Honors Thesis, Co-supervised with A/Prof. M. McCabe)
3. Laure Pouyanné (2011): (UNSW Practicum student, Co-supervised with Dr. G. Abramowitz)
4. Haowei Zhao (2012): (UNSW, Co-supervised with A/Prof. M. McCabe)
5. Rex Cover (2012): (UNSW Honors Thesis, Co-supervised with A/Prof. M. McCabe)
6. Atinder Sanghera (2016): (UNSW Honors Thesis, Co-supervised with Prof. A. Sharma)
7. Tanapon Lilasathapornkit (2016): (UNSW Honors Thesis, Co-supervised with Prof. A. Sharma)

UC Riverside:

1. Mohamed Eissa (6/2017-12/2017): (UCR, Semi-distributed modeling)
2. Kyle Fructuoso (9/2017-12/2017): (UCR, Seawater intrusion);
3. Austin Fimbres (9/2017-12/2017): (UCR, Stream flow analysis)
4. Huihai Wang (10/2017-12/2017): (UCR, Hydrologic modeling)
5. Carly Pierce (9/2018-12/2018): (UCR, Land cover change analysis in Salton Sea)
6. Kelly Perez (6/2019-10/2019): (UCR, Groundwater monitoring in Central Valley)
7. Jacob Palmer (12/2018-9/2019): (UCR, Chemical and Environmental Engineering)
8. Maxim Shapovalov (1/2021-6/2022): (UCR, Earth & Planetary Sciences)
9. William Scott Burgess (6/2021-6/2022): (UCR, Mathematics, Digital Agriculture Fellow)
10. Kelso Day (3/2023-6/2023): (UCR, Environmental Sciences)
11. Gabrielle Ramratan Gajadhar (3/2023-6/2023): (UCR, Environmental Sciences)
12. Valerie Gonzales (9/2022 – 4/2025): (UCR, Environmental Sciences, Digital Agriculture Fellow)
13. Jose Angel Pulido (6/2023 – 6/2024): (UCR, Electrical Engineering, Digital Agriculture Fellow)
14. Lily Caplon-Guin (6/2023 – Present): (UCR, Bioengineering, Digital Agriculture Fellow, Honors Thesis Advisor)
15. Daniel Hernandez (6/2024 – 8/2024): (Santa Ana College, Computer Science, Digital Agriculture Fellow)
16. Hailey Glamore-Scott (6/2024 – 6/2025): (UCR, Computer Engineering, Digital Agriculture Fellow)
17. Jose Angel Pulido (7/2025 – 9/2025): (UCR, Electrical Engineering)
18. Shwetha Anand (6/2025 – Present): (UCR, Data Science, Digital Agriculture Fellow)
19. Refugio Zepeda (6/2025 – Present): (UCR, Data Science, Digital Agriculture Fellow)

Graduate Students, Postdocs, and Visiting Scholars:

1. Urooj Khan (2012-2014): (PhD, UNSW, Co-supervised with Prof. A. Sharma)
2. Bushra Naseem (2012-2017): (PhD, UNSW, Co-supervised with Prof. A. Sharma)

UC Riverside-Graduate Students:

1. Jacob Palmer (9/2019- 2020): (MS coursework, Chemical and Environmental Engineering, UCR)
2. Aarushi Jhatro (Jha) (9/2018- 9/2020): (MS Thesis, Environmental Sciences, UCR)
3. Kiarash Ehsani (9/2019- 3/2021): (MS coursework, Environmental Sciences, UCR)

4. Alyssa Duro (9/2020- 7/2023): (MS, Environmental Sciences, UCR, Co-advised with Prof. D. Hirmas)
5. Eric Wineteer (9/2021-Present): (PhD, Environmental Sciences)
6. Vaishnavi Varikuti (9/2022-Present): (PhD, Plant and Soil Science, Texas Tech University, Co-advised with Prof. D. Hirmas)
7. Simmi Tomar (9/2022-9/2024): (PhD, Environmental Sciences, Co-advised with Prof. A. Gray and Prof. D. Hirmas at Texas Tech University)

UC Riverside- Postdocs:

1. Seokhyeon Kim (3/2017-9/2020): (Postdoctoral fellow, UNSW, Co-advised with Prof. A. Sharma on ecohydrologic modeling with SMART)
2. Adam Schreiner McGraw (1/2018- 8/2021): (Postdoctoral fellow, UCR)
3. Sanghyun Lee (7/2022- 11/2022): (Postdoctoral fellow, UCR)
4. Yusen Yuan (2/2022- 2/2023): (Postdoctoral fellow, UCR)
5. Julio Pachon (2/2022- 3/2023): (Postdoctoral fellow, UCR, Co-advised with Prof. D. Hirmas)
6. Sandra Armengol Vall (4/2021-7/2023): (Postdoctoral fellow, UCR)
7. Juan Sebastian Acero Triana (9/2020- 9/2025): (Postdoctoral fellow, UCR)
8. Lin Chen (9/2021- 1/2024): (Postdoctoral fellow, UCR, Co-advised with Prof. J. Simunek and Dr. S. Bradford)
9. Sakiur Rahman (2/2023- 9/2025): (Postdoctoral fellow, UCR, Co-advised with Prof. J. Simunek and Dr. S. Bradford)
10. Matthew Amato (10/2023-7/2024): (Postdoctoral fellow, UCR, Co-advised with Prof. D. Hirmas)
11. Srishti Gaur (8/2024-8/2025): (Postdoctoral fellow, UCR)
12. Taylor McDowell (9/2024-Present): (Postdoctoral fellow, Texas Tech University, Co-advised with Prof. D. Hirmas)
13. Xinying Ling (9/2024-10/2025): (Postdoctoral fellow, UCR, Co-advised with Dr. M. Meles USDA ARS)
14. Bing Li (3/2025-Present): (Postdoctoral fellow, UCR, Co-advised with Prof. D. Hirmas)
15. Jason Goulding (10/2025-Present): (Postdoctoral fellow, UCR, Co-advised with Dr. M. Meles USDA ARS)
16. Juan Sebastian Acero Triana (9/2020- Present): (Project Scientist, UCR)

UC Riverside - Visiting Scholars

1. Clare Stephens (6/2016-9/2019): (PhD, UNSW, mentored for ecohydrologic modeling, UCR visiting scholar)
2. Conrad Wasko (11/2018-12/2018): (Postdoctoral fellow, Melbourne University, UCR visiting scholar)

Refereed Journal Articles (Underlined postdoc advisee, *Graduate student, †Visiting scholar)

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70. Jarecke, K.M., R.M. Keen, K. Singha, J.B. Nippert, S.A. Billings, X. Zhang, K. Sadayappan, M.F. Kirk, D. R. Hirmas, L. Li, H. Ajami, M. Dumont, A.N. Flores, P.L. Sullivan. 2025. Woody Encroachment Intensifies Deep Soil Drying at Daily, Seasonal, and Decadal Scales, *Ecosystems*, 28, 64. <https://doi.org/10.1007/s10021-025-01008-0>

69. Wang, L., S.A. Billings, L. Li, D.R. Hirmas, K. Johnson, D. Kerins, J. Pachon, C. Beutler, K.M. Jarecke, V. Varikuti*, M. Unruh, **H. Ajami**, H. Barnard, A.N. Flores, K. Williams, P.L. Sullivan. 2025. Soil Signals of Key Mechanisms Driving Greater Protection of Organic Carbon Under Aspen Compared to Spruce Forests in a North American Montane Ecosystem, *Biogeosciences*, 22, 6097–6117, <https://doi.org/10.5194/bg-22-6097-2025>
68. Silwimba, K., A.N. Flores, I. Cionni, S.A. Billings, P.L. Sullivan, **H. Ajami**, D.R. Hirmas, L. Li. 2025. Soil Parameterization in Land Surface Models Drives Large Discrepancies in Soil Moisture Predictions Across Hydrologically Complex Regions of the Contiguous United States, *Geoscientific Model Development*, 18, 7707–7734, <https://doi.org/10.5194/gmd-18-7707-2025>
67. Li, B., M. Sprenger, B.M. Wyatt, D. Giménez, D.R. Hirmas, **H. Ajami**, I. Wiekenkamp, J. Groh, J.R. Nimmo, M.T. Amato, N.K. Singh, O. Crompton, R. Araki, T. Xu, P.L. Sullivan. 2025. Ubiquity and Causes of Soil Water Preferential Flow Across 17 Ecoregions, *Geophysical Research Letters*, 52, e2025GL118045, <https://doi.org/10.1029/2025GL118045>
66. Guthrie, A., D. Hirmas, P.L. Sullivan, L. Li, **H. Ajami**, K. Singha, A.N. Flores, H. Wen, A. Rudick, S.A. Billings. 2025. Deep Root Loss and Regeneration in the Anthropocene Drive Continental-scale Changes in Deep Soil Structure, *Earth's Future*, 13, e2025EF006326. <https://doi.org/10.1029/2025EF006326>
65. Hirmas, D.R., **H. Ajami**, M.G. Sena, X. Zhang, X. Cao, B. Li, K.M. Jarecke, S.A. Billings, J.C. Pachon, L. Li, J. B. Nippert, L.F. Souza, A.N. Flores, P.L. Sullivan. 2025. Predicting Soil Interpedal Macroporosity and Hydraulic Conductivity Dynamics: A Model for Integrating Laser-scanned Profile Imagery with Soil Moisture Sensor Data, *Water Resources Research*, <https://doi.org/10.1029/2024WR039836>
64. Camporese, M., O.S. Schilling, **H. Ajami**. 2025. Advances in Integrated Surface-Subsurface Hydrological Modeling, *Frontiers in Water*, DOI: [10.3389/frwa.2025.1680183](https://doi.org/10.3389/frwa.2025.1680183)
63. Rahman, ATM S., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles, L. Chen, A. Szymkiewicz, M. Pawłowicz, J.S. Acero Triana, J. A. Casillas Trasvina, S. Beegum. 2025. A New Externally Coupled, Physically-based Multi-model Framework for Simulating Subsurface and Overland Flow Hydrological Processes on Hillslopes, *Journal of Hydrology*, <https://doi.org/10.1016/j.jhydrol.2025.133842>
62. Stewart, R. D., M. Flury, **H. Ajami**, R.G. Anderson, T.R. Green, Y. Jin, A. Patrignani, R. Shillito, W. Zhang, M.R.A. Najm, E. Babaeian, M. Berli, E.N.J. Brookshire, A.L.M. Daigh, S. Franklin, J. Giovando, R. Heinse, J. Heitman, J. Huang, T. Kelleners, M. Naseri, T.E. Ochsner, J. Radolinski, M. Sadeghi, S. Sasidharan, M.K. Shukla, M. Tuller, O. Wendroth, J. Wu, B. M. Wyatt, Y. Yang, Y. Yu, Z.F.

- Zhang. 2025. Emerging Issues and Research Opportunities in Vadose Zone Processes, *Vadose Zone Journal*, 24, e70030. <https://doi.org/10.1002/vzj2.70030>
61. Tomar, S.*, D.R. Hirmas, R.C. Graham, M. Cole, **H. Ajami**, A. Frisbie, A.B. Gray, E. Blake. 2025. Soil Development Along An Elevational Transect in the Arid White Mountains, California, *Soil Science Society of America Journal*, 89, e70083. <https://doi.org/10.1002/saj2.70083>
60. Singh, N.K., S.M. Saia, R. Bhattacharya, **H. Ajami**, D.M. Borrok. 2025. Unraveling the Causal Influences of Drought and Crop Production on Groundwater Levels Across the Contiguous United States. *PNAS Nexus*, <https://doi.org/10.1093/pnasnexus/pgaf129>
59. Nimmo, J. R., I. Wiekenkamp, R. Araki, J. Groh, N.K. Singh, O. Crompton, B.M. Wyatt, **H. Ajami**, D. Giménez, D.R. Hirmas, P.L. Sullivan, M. Sprenger. 2025. Identifying Preferential Flow From Soil Moisture Time Series: Review of Methodologies, *Vadose Zone Journal*, 24, e70017. <https://doi.org/10.1002/vzj2.70017>
58. Acero Triana, J.S., **H. Ajami**, S. Razavi. The Dilemma of Objective Function Selection for Sensitivity and Uncertainty Analyses of Semi-Distributed Hydrologic Models Across Spatial and Temporal Scales. *Journal of Hydrology*, <https://doi.org/10.1016/j.jhydrol.2024.132482>
57. Jarecke, K.M., X. Zhang, R.M. Keen, M. Dumont, B. Li, K. Sadayappan, V. Moreno, **H. Ajami**, S.A. Billings, A.N. Flores, D.R. Hirmas, M.F. Kirk, L. Li, J. B. Nippert, K. Singha, P.L. Sullivan. Woody Encroachment Modifies Subsurface Structure and Hydrological Function, *Ecohydrology*, <https://doi.org/10.1002/eco.2731>
56. Dhungel, R., R.G. Anderson, A.N. French, T.H. Skaggs, **H. Ajami**, D. Wang. Intercomparison of Citrus Evapotranspiration Among Eddy Covariance, OpenET Ensemble Models, and Water and Energy Balance Model (BAITSSS), *Agricultural Water Management*, <https://doi.org/10.1016/j.agwat.2024.109066>
55. Armengol Vall, S., **H. Ajami**, J.S. Acero Triana, J. O'Sickman, L. Ortega. 2024. Isogeochemical Characterization of Mountain System Recharge Processes in the Sierra Nevada, California. *Water Resources Research*, 60, e2023WR035719, <https://doi.org/10.1029/2023WR035719>
54. Meles, M.B., S. Bradford, A. Casillas-Trasvina, L. Chen, G. Osterman, T. Hatch, **H. Ajami**, O. Crompton, L. Levers, I. Kisekka. 2024. Uncovering the Gaps in Managed Aquifer Recharge for Sustainable Groundwater Management: A Focus on Hillslopes and Mountains, *Journal of Hydrology*, 639, <https://doi.org/10.1016/j.jhydrol.2024.131615>
53. Meles, M.B., L. Chen, C. Unkrich, **H. Ajami**, S. Bradford, J. Simunek, D.C. Goodrich. 2024. Computationally Efficient Watershed-Scale Hydrological Modeling:

- Integrating HYDRUS-1D and KINEROS2 for Coupled Surface-Subsurface Analysis, *Journal of Hydrology*, 640, <https://doi.org/10.1016/j.jhydrol.2024.131621>
52. Zipper, S., A. Brookfield, **H. Ajami**, J.R. Ayers, C. Beightel, M.N. Fienen, T. Gleeson, J. Hammond, M. Hill, A.D. Kendall, B. Kerr, D. Lapides, M. Porter, S. Parimalarenganayaki, M.M. Rohde, C. Wardropper. 2024. Streamflow Depletion Caused by Groundwater Pumping: Fundamental Research Priorities for Management-relevant Science, *Water Resources Research*, 60, e2023WR035727. <https://doi.org/10.1029/2023WR035727>
 51. Yuan, Y., L. Wang, Z. Wei, **H. Ajami**, H. Wang, T. Du. 2024. Using Median Point in Keeling Plot to Reduce the Uncertainty of the Isotopic Composition of Evapotranspiration, *Journal of Hydrometeorology*, <https://doi.org/10.1175/JHM-D-23-0133.1>
 50. Duro, A. M.*, D.R. Hirmas, **H. Ajami**, S.A. Billings, X. Zhang, L. Li, A. Flores, V. Moreno, X. Cao, J. Guilinger, E. Oleghe, D. Giménez, A. Gray, P.L. Sullivan. 2024. Topographic Correction of Visible Near-Infrared Reflectance Spectra for Horizon-Scale Soil Organic Carbon Mapping, *Soil Science Society of America Journal*, 88(2), 207–223, <https://doi.org/10.1002/saj2.20612> (Co-corresponding author with Hirmas)
 49. Chen, L., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles. 2024. Coupling Water, Solute, and Sediment Transport into a New Computationally Efficient Hydrologic Model, *Journal of Hydrology*, 628, <https://doi.org/10.1016/j.jhydrol.2023.130495>
 48. Lee, S., **H. Ajami**. 2023. Comprehensive Assessment of Baseflow Responses to Long-term Meteorological Droughts across the United States, *Journal of Hydrology*, 626, <https://doi.org/10.1016/j.jhydrol.2023.130256>
 47. Koop, A.N., D.R. Hirmas, S.A. Billings, L. Li, A. Cueva, X. Zhang, H. Wen, A. Nemes, L.F.T. Souza, **H. Ajami**, A.N. Flores, A.K. Rudick, A. Guthrie, L.M. Klammer, M. Unruh, P.L. Sullivan. 2023. Is Macroporosity Controlled by Complexed Clay and Soil Organic Carbon? *Geoderma* 437, 116565, <https://doi.org/10.1016/j.geoderma.2023.116565>
 46. Brookfield, A.E., S. Zipper, A.D. Kendall, **H. Ajami**, J.M. Deines. 2023. Estimating Groundwater Pumping for Irrigation - A Method Comparison, *Groundwater*. <https://doi.org/10.1111/gwat.13336>
 45. Souza, L.F.T., D.R. Hirmas, P.L. Sullivan, D.C. Reuman, M.F. Kirk, L. Li, **H. Ajami**, H. Wen, M.V.M. Sarto, T.D. Loecke, A.K. Rudick, C.W. Rice, S.A. Billings. 2023. Root Distributions, Precipitation, and Soil Structure Converge to Govern Soil Organic Carbon Depth Distributions, *Geoderma*, 437, 116569, <https://doi.org/10.1016/j.geoderma.2023.116569>

44. Brookfield, A.E., **H. Ajami**, R.W.H. Carroll, C. Tague, P.L. Sullivan, L.E. Condon. 2023. Recent Advances in Integrated Hydrologic Models: Integration of New Domains, *Journal of Hydrology*, 620, <https://doi.org/10.1016/j.jhydrol.2023.129515>
43. Aiken, M.L., C.E. Pace, M. Ramachandran, K.A. Schwabe, **H. Ajami**, B.G. Link, S.C. Ying. 2023. Disparities in Drinking Water Manganese Concentrations in Domestic Wells and Community Water Systems in the Central Valley, CA, USA, *Environmental Science and Technology*, 57, 1987–1996, <https://doi.org/10.1021/acs.est.2c08548>
42. Chen, L., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles. 2022. A Computationally Efficient Hydrologic Modeling Framework to Simulate Surface-Subsurface Hydrological Processes at the Hillslope Scale, *Journal of Hydrology*, 614, <https://doi.org/10.1016/j.jhydrol.2022.128539>
41. Stephens, C†. M., L.A. Marshall, F.M. Johnson, **H. Ajami**, L. Lin, L.E. Band. 2022. Spatial Variation in Catchment Response to Climate Change Depends on Lateral Moisture Transport and Nutrient Dynamics, *Water Resources Research*, 58, e2021WR030577, <https://doi.org/10.1029/2021WR030577>
40. Acero Triana, J. S., **H. Ajami**. 2022. Identifying Major Hydrologic Change Drivers in a Highly Managed Transboundary Endorheic Basin: Integrating Hydro-ecological Models and Time-Series Data Mining Techniques, *Water Resources Research*, 58, e2022WR032281, <https://doi.org/10.1029/2022WR032281>
39. Wen, H., P.L. Sullivan, S.A. Billings, **H. Ajami**, A. Cueva, A. Flores, D.R. Hirmas, A.N. Koop, K. Murenbeeld, X. Zhang, L. Li. 2022. From Soils to Streams: Connecting Terrestrial Carbon Transformation, Chemical Weathering, and Solute Export Across Hydrological Regimes, *Water Resources Research*, 58, e2022WR032314, <https://doi.org/10.1029/2022WR032314>
38. Schreiner-McGraw, A. P., **H. Ajami**, R.G. Anderson, D. Wang. 2022. Integrating Partitioned Evapotranspiration Data into Hydrologic Models: Vegetation Parameterization and Uncertainty Quantification of Simulated Plant Water Use, *Hydrological Processes*, 36(6), e14580, <https://doi.org/10.1002/hyp.14580>
37. Bradly, T., **H. Ajami**, W. Porter. 2022. Ecological Transitions at the Salton Sea: Past, Present and Future, *California Agriculture*, 76, 1, <https://doi.org/10.3733/ca.2022a0004>
36. Zipper, S.C., W.H. Farmer, A. Brookfield, **H. Ajami**, H.W. Reeves, C. Wardropper, J.C. Hammond, T. Gleeson, J.M. Deines. 2022. Quantifying Streamflow Depletion from Groundwater Pumping: A Practical Review of Past and Emerging Approaches for Water Management, *Journal of the American Water Resources Association*, <https://onlinelibrary.wiley.com/doi/full/10.1111/1752-1688.12998>

35. Schreiner-McGraw, A., **H. Ajami**.2022. Combined Impacts of Uncertainty in Precipitation and Air Temperature on Simulated Mountain System Recharge from an Integrated Hydrologic Model, *Hydrology & Earth System Sciences*, 26, 1145–1164, <https://doi.org/10.5194/hess-26-1145-2022>
34. Sullivan, P.L., S. Billings, D. Hirmas, L. Li, X. Zhang, S. Ziegler, K. Murenbeeld, **H. Ajami**, A. Guthrie, K. Singha, D. Giménez, A. Duro, V. Moreno, A. Flores, A. Cueva, A. Koop, E.L. Aronson, H.R. Barnard, S.A. Banwart, R.M. Keen, A. Nemes, N.P. Nikolaidis, J.B. Nippert, D. Richter, D.A. Robinson, K. Sadayappan, L.F.T. de Souza, M. Unruh, H. Wen. 2022. Embracing the Dynamic Nature of Soil Structure: A Paradigm Illuminating the Role of Life in Critical Zones of the Anthropocene, *Earth-Science Reviews*, <https://doi.org/10.1016/j.earscirev.2021.103873>.
33. Cowger, W.C., A. Gray, H. Hapich, J. Osei-Enin, B. Huynh, H. Nogi, S. Singh, S. Brownlee, J. Fong, T. Lok, G. Singer, **H. Ajami**.2022. Litter Origins, Accumulation Rates, and Hierarchical Composition on Urban Roadsides of the Inland Empire, California, *Environmental Research Letters*, doi:10.1088/1748-9326/ac3c6a/meta
32. Schreiner-McGraw, A, **H. Ajami**.2021. Delayed Response of Groundwater to Multi-year Meteorological Droughts in the Absence of Anthropogenic Management, *Journal of Hydrology*, doi: 10.1016/j.jhydrol.2021.126917
31. Schreiner-McGraw, A., **H. Ajami**.2020. Impact of Uncertainty in Precipitation Forcing Datasets on the Hydrologic Budget of an Integrated Hydrologic Model in Mountainous Terrain, *Water Resources Research*, <https://doi.org/10.1029/2020WR027639>
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29. Stephens†, C. M., L.A. Marshall, F.M. Johnson, L. Lin, L.E. Band, **H. Ajami**. 2020. Is Past Variability a Suitable Proxy for Future Change? A Virtual Catchment Experiment, *Water Resources Research*, 56, <https://doi.org/10.1029/2019WR026275>
28. Schreiner-McGraw, A., E. Vivoni, **H. Ajami**, O.E. Sala, H.L. Throop, D.P.C. Peters. 2020. Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets, *Scientific Reports*, <https://doi.org/10.1038/s41598-020-65094-x>.
27. Schreiner-McGraw, A., **H. Ajami**, E. Vivoni. 2019. Extreme Weather Events and Transmission Losses in Arid Streams, *Environmental Research Letters*, doi: 10.1088/1748-9326/ab2949

26. Tang, Y., L. Marshall, A. Sharma, **H. Ajami**, D.J. Nott. 2019. Ecohydrologic Error Models for Improved Bayesian Inference in Remotely Sensed Catchments, *Water Resources Research*, <https://doi.org/10.1029/2019WR025055>
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- Modeling Future Groundwater Recharge to Predict Potential Climate Change Impacts, *Journal of Hydrology*, <http://dx.doi.org/10.1016/j.jhydrol.2017.01.005>
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 15. **Ajami, H.**, U. Khan, N.K. Tuteja, A. Sharma. 2016. Development of a Computationally Efficient Semi-distributed Hydrologic Modeling Application for Soil Moisture, Lateral Flow and Runoff Simulation, *Environmental Modelling and Software*, 85, 319–331, doi: <http://dx.doi.org/10.1016/j.envsoft.2016.09.002>
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4. **Ajami, H.**, T. Meixner, F. Dominguez, J.F. Hogan, T. Maddock III. 2012. Seasonalizing Mountain System Recharge in Semi-Arid Basins-Climate Change Impacts, *Ground Water*, 50(4): 585-597, doi:10.1111/j.1745-6584.2011.00881.x
3. **Ajami, H.**, P.A. Troch, T. Maddock III, T. Meixner, C. Eastoe. 2011. Quantifying Mountain Block Recharge by Means of Catchment-Scale Storage-Discharge Relationship, *Water Resources Research*, 47, W04504, doi:10.1029/2010WR009598
2. **Ajami, H.**, T. Meixner, T. Maddock III, J.F. Hogan, D.P. Guertin. 2011. Impact of Land-Surface Elevation and Riparian Evapotranspiration Seasonality on Groundwater Budget in MODFLOW Models, *Hydrogeology Journal*, 19:1181-1188, doi:10.1007/s10040-011-0743-0
1. Stromberg, J.C., M.G.F. Tluczek, A.F. Hazelton, **H. Ajami**. 2010. A Century of Riparian Forest Expansion Following Extreme Disturbance: Spatio-Temporal Change in *Populus/Salix/Tamarix* Forests Along the Upper San Pedro River, Arizona, USA, *Forest Ecology and Management*, 259 (6):1181-1189, <https://doi.org/10.1016/j.foreco.2010.01.005>

Book Chapters

1. **Ajami, H.** 2020. Geohydrology: Global Hydrological Cycle, *Encyclopedia of Geology 2nd Edition*, Elsevier, <https://doi.org/10.1016/B978-0-12-409548-9.12387-5>
2. **Ajami, H.** 2020. Geohydrology: Groundwater, *Encyclopedia of Geology 2nd Edition*, Elsevier, <https://doi.org/10.1016/B978-0-12-409548-9.12388-7>

Technical Reports-Peer Reviewed

11. **Ajami, H.** 2021. Salton Sea Hydrology and Water Resources, In: *Crisis at the Salton Sea: Research Gaps and Opportunities*, Salton Sea Task Force, The EDGE Institute, University of California Riverside, <https://www.saltonseatactforce.ucr.edu/>
10. Cayan, D., D. Pierce, L. DeHaan, J. Guzman-Morales, A. Gershunov, R. Clemesha, A. Martin, P. Ullrich, L. Shu, **H. Ajami**, A. Schreiner McGraw. 2020. White Paper -

Downscaling Using Dynamical and Statistical Methods, *California Energy Commission*, [19-ERDD-01](#)

9. **Ajami, H.** 2019. Understanding Nonstationary Hydrologic Response from Local to Global Scales (White paper), *In: Open Watershed Science by Design: Leveraging Distributed Research Networks to Understand Watershed Systems*, [Workshop Report](#), US Department of Energy, Office of Biological and Environmental Research
8. Hopkins, F., V. Carranza, **H. Ajami**, J.E. Allison, R.G. Anderson, C.W., Barrows, M. Barth, D.R. Jenerette, D.R., W.C. Porter, T. Rolinski, K. Schwabe, C. Yáñez, N. Yu. 2018. Inland Deserts Summary Report. California's Fourth Climate Change Assessment. Publication number: [SUM-CCCA4-2018-008](#).
7. **Ajami, H.**, U. Khan, N.k. Tuteja, A. Sharma. 2016. Semi-Distributed Hydrologic Modelling with Soil Moisture And Runoff simulation Toolkit (SMART) [User's Manual](#).
6. Maddock III, T., K. Baird, R.T. Hanson, W. Schmid, **H. Ajami**. 2012, RIP-ET: A Riparian Evapotranspiration Package for MODFLOW-2005, U.S. Geological Survey, USA, Section A, Groundwater Book 6, Modeling Techniques, Techniques and Methods 6-A39, Government Report, <http://pubs.usgs.gov/tm/tm6a39/>
5. **Ajami, H.**, T. Maddock III. 2009. RIPGIS-NET: An ArcGIS Custom Application for the RIP-ET Package in MODFLOW-2000 and MODFLOW 2005, HWR Report no. 10-010, 247 pp, Department of Hydrology & Water Resources, University of Arizona, Tucson, Arizona.
4. Steinitz, C., R. Faris, J.C. Vargas-Moreno, G. Huang, S. Lu, O. Arizpe, M. Angeles, F. Santiago, A. Ivanova, A.E. Gámez, K. Baird, T. Maddock III, **H. Ajami**, L. Huato, M.J. Haro, M. Flaxman. P. Ganster, A. Villegas, C. Lopez. 2005. Alternative Futures for the Region of Loreto, Baja California Sur, Mexico. https://irsc.sdsu.edu/resources/docs/Loreto%20AlternativeFutures_Report_2005.pdf
3. **Ajami, H.**, D.P. Guertin, L. Levick, K. Uhlman. 2005. NEMO Watershed Based Plan-Upper Gila Watershed. <https://repository.arizona.edu/handle/10150/186515>
2. Black, C., **H. Ajami**, D.P. Guertin, L. Levick, K. Uhlman. 2005. NEMO Watershed Based Plan-Verde Watershed. <https://repository.arizona.edu/handle/10150/186516>
1. **Ajami, H.**, D.P. Guertin, L. Levick, K. Uhlman. 2005. NEMO Watershed Based Plan-Bill Williams Watershed. <https://repository.arizona.edu/handle/10150/186509>

Invited Presentations (Underlined postdoc advisee, *Graduate student, †Visiting scholar)

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1. **Ajami, H.**, J. Acero Triana. 2025. Development of an Integrated Hydrologic Modeling Framework to Improve Water Resources Management in the Salton Sea Basin, Whitman College Seminar, UCR Palm Desert, November 2025

2. **Ajami, H.** 2025. Improving Water Resource Management Using Hydrologic Models, *Oral Presentation*, 4th Los Angeles Urban Soil Symposium, March 2025
3. **Ajami, H.** 2025. Understanding Groundwater Response to Droughts and Recharge Dynamics Using Integrated Hydrologic Modeling Approaches, *Oral Presentation*, Hewett Club Speaker, Department of Earth and Planetary Sciences, UC Riverside
4. **Ajami, H., J.S. Acero Triana.** 2024. Development of an Integrated Hydrologic Modeling Framework to Improve Water Management in the Salton Sea Basin, *Oral Presentation*, Salton Sea Summit, UCR Palm Desert Campus, October 2024
5. **Ajami, H.** 2024. Application of Data Driven and Integrated Hydrologic Modeling Approaches in Hydrologic Sciences, *Oral Presentation*, Department of Computer Science and Engineering Colloquium, University of California Riverside, May 2024
6. **Ajami, H., J.S. Acero Triana.** 2024. Development of an Integrated Hydrologic Modeling Framework to Improve Water Resources Management in the Salton Sea Basin, *Oral Presentation*, Salton Sea Future Hydrology Workshop by US Army Corps of Engineers, May 2024
7. **Ajami, H.** 2024. Understanding Climate-Groundwater Feedbacks Using Data Driven and Integrated Hydrologic Modeling Approaches, *Oral Presentation*, Texas Tech University Seminar Series, April 2024
8. **Ajami, H.** 2024. How Do Uncertainties in Initial Conditions and Climate Forcing Influence Integrated Hydrologic Model Simulations Across Mountain-Valley Aquifer Systems? *Online Oral Presentation*, DOE IDEAS-Watersheds Modeling Seminar Series, March 2024
9. **Ajami, H., S. Armengol Vall, J.S. Acero Triana, E. Wineteer*.** 2023. Understanding Mountain System Recharge Mechanisms in the Sierra Nevada-Integrating Isogeochemical Observations with Numerical Modeling, *Oral Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
10. **Ajami, H.** 2023. Understanding Climate-Groundwater Feedbacks in Mountain-Valley Aquifers, *Oral Presentation*, State of the Basin, Tulare Basin Watershed Network Meeting
11. **Ajami, H.** 2023. Understanding Climate-Groundwater Feedbacks in Coupled Natural-Human Systems, *Oral Presentation*, Stanford University
12. **Ajami, H., J.S. Acero Triana, Y. Yuan, R.G. Anderson, D. Wang.** 2022. Understanding Ecohydrologic Processes of Irrigated Agricultural Ecosystems by Integrating in-Situ and Modeling Approaches, *Oral Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago

13. **Ajami, H., J.S. Acero Triana.**2022. Improving Water Resource Management in the Salton Sea Basin by using Watershed Models, *Oral Presentation*, Salton Sea Coalition Community Forum
14. **Ajami, H., J.S. Acero Triana, K. Schwabe, C. Fei, D. Yeganantham, B. McCarl, R. Srinivasan.**2022. Improving Water Resources Management Under Change by Integrating Hydro-Economic Modeling Frameworks, *Online Oral Presentation*, Science-Policy Dialogue at the Food-Energy-Water Nexus Workshop, Texas A&M University, November 2022
15. **Ajami, H.** 2022. Climate Change Impacts on California's Water - The Science of Drought in the Anthropocene, *Online Oral Presentation*, California Water Law and Policy conference
16. **Ajami, H.** 2022. Understanding Groundwater Response to Meteorological Droughts using Data Driven and Integrated Hydrologic Modeling Approaches, *Oral Presentation*, Cal Poly Pomona, College of Science Lecture Series
17. **Ajami, H., J.S. Acero Triana.** 2022. Improving Water Resource Management in the Salton Sea Basin using an Integrated Modeling Framework, *Oral Presentation*, Salton Sea Summit, UCR Palm Desert Campus
18. **Ajami, H.** 2022. Effects of Droughts on Groundwater Recharge, *Oral Presentation*, American Ground Water Trust/Association of Groundwater Agencies Conference, Lakewood, CA
19. **Ajami, H.** 2021. Climate Change Impact Assessment on Water Resources, *Online Oral Presentation*, California State University San Bernardino
20. **Ajami, H.** 2021. Understanding Groundwater Response to Meteorological Droughts Using Data Driven and Integrated Modeling Approaches, *Online Oral Presentation*, University of Iowa
21. **Ajami, H.** 2021. Application of GIS and Remote Sensing Tools for Hydrologic Investigation and Water Resources Planning, *Online Oral Presentation*, Geospatial/GIS faculty panel University of California Riverside Library
22. **Ajami, H.** 2021. Understanding Ecohydrologic Processes of Agricultural Ecosystems from Headwaters to Groundwater During Droughts, *Online Oral Presentation*, UC ANR Water Seminar Series
23. **Ajami, H.**2021. Application of GIS and Remote Sensing Tools for Hydrologic Investigation and Water Resources Planning, *Online Oral Presentation*, UCR Earth and Planetary Sciences GIS course, Guest Lecture

24. **Ajami, H.** 2021. Towards Improved Hydrologic Predictions by Merging Data with Models, *Online Oral Presentation*, UCR Earth and Planetary Sciences miniGSA
25. **Ajami, H., A. Jha*, A. Schreiner-McGraw.** 2020. Ecohydrologic Processes of Irrigated Agriculture Control Lake-Groundwater Interactions in a Highly Managed Watershed, *Online Oral Presentation*, American Geophysical Union, 2020 Fall meeting
26. Fogel, M., R. Bahreini, **H. Ajami**, T. Lyons, J. Nye, C. Hung, D. Jenerette, M. McKibben, A. Raju. 2020. Environmental Crisis at the Salton Sea. *Webinar*, Evolution, Ecology and Organismal Biology, University of California Riverside
27. **Ajami, H., A. Schreiner-McGraw.** 2019. Characterizing Mountain System Recharge Processes from Headwaters to Groundwaters, *Oral Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA.
28. **Ajami, H.** 2019. Driving Efficiency and Resiliency in Agricultural Water Stewardship, World Water-Tech North America, Los Angeles, CA. (Speaker and Panel member)
29. **Ajami, H.** 2019. Improving Water Resource Management using an Integrated Modeling Framework, *Oral Presentation*, Salton Sea Summit 2019, UC Riverside/Palm Desert Campus, October 2019, CA
30. **Ajami, H., A. Schreiner-McGraw.** 2019. Characterizing Mountain System Recharge Processes and Variability - A recent synthesis, *Oral Presentation*, Geological Society of America 2019 Annual meeting, Phoenix, Arizona
31. **Ajami, H., M.F. McCabe, J.P. Evans, S. Stisen.** 2019. On the Role of Integrated Groundwater-Land Surface Models for Groundwater Sustainability Assessments, *Oral Presentation*, Geological Society of America 2019 Annual meeting, Phoenix, Arizona
32. **Ajami, H.** 2019. Towards Improved Hydrologic Prediction by Merging Data with Models, *Oral Presentation*, USDA Salinity Lab Seminar Series, Riverside, CA
33. **Ajami, H.** 2018. Groundwater & the Importance of Interdisciplinarity, *Oral Presentation*, UC Water American Geophysical Union Meeting Reception, Washington D.C.
34. **Ajami, H., D. Chisholm.** 2018. Virtualizing ArcGIS Pro in AWS: Workspaces/GPU Bundles, GeoNet Webinar, Environmental System Research Institute
35. **Ajami, H, K. Schwabe.** 2018. Hydrologic Assessment: Current Status and Future Challenges for Adaptation to Climate Change, *Oral Presentation*, 4th Climate Change Assessment Symposium-Inland Deserts Region, UCR Palm Desert

36. **Ajami, H.** 2018. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments, *Oral Presentation*, Geophysical research group seminar series, Stanford University
37. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction by Merging Data with Models, *Oral Presentation*, Data Science Center Seminar series, University of California Riverside
38. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction using Integrated Land Surface-Groundwater Models, *Oral Presentation*, Earth Sciences Seminar, University of Southern California
39. **Ajami, H.** 2017. What Are the Characteristic Hillslopes? How Does Water Move through Each, and How Are They Connected to Streams, Floodplains, Wetlands? Cyber-seminar, Consortium of Universities for the Advancement of Hydrologic Science
40. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction using Integrated Land Surface-Groundwater Models, *Oral Presentation*, ES/ESS Seminar/UC Water, University of California Merced
41. **Ajami, H.** 2017. Toward Improved Hydrologic Prediction Using Integrated Land Surface Groundwater Models, *Oral Presentation*, CEE Seminar, University of California Irvine
42. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models, *Oral Presentation*, Geological Sciences Department Seminar, Cal Poly Pomona, CA
43. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models, W3188: Soil, Water, and Environmental Physics Across Scales, *Oral Presentation*, Multistate Annual Meeting, Las Vegas, Nevada
44. **Ajami, H.** 2016. A Hydrologist Perspective on Mathematical Modeling of Terrestrial Hydrologic Processes, *Oral Presentation*, Interdisciplinary Seminar on Mathematical and Computational Modeling, University of California Riverside
45. **Ajami, H.** 2016. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models, *Oral Presentation*, Hydrology and Atmospheric Sciences Weekly Colloquium, University of Arizona
46. **Ajami H.** 2016. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models, *Oral Presentation*, Department of Earth and Atmospheric Sciences Seminar, University of Nebraska-Lincoln

47. **Ajami H.** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models, *Online Oral Presentation*, Department of Hydrology and Hydraulic Engineering Webinar, Vrije Universiteit Brussel, Belgium
48. **Ajami H.** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models, *Online Oral Presentation*, Hydrology and Quantitative Water Management Webinar, Wageningen University, Netherlands
49. **Ajami H.** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models, *Oral Presentation*, Department of Civil Engineering, University of Bristol, United Kingdom
50. **Ajami, H.** 2014. Quantifying Spatial and Temporal Variability of Recharge Processes in Semi-Arid Basins, *Oral Presentation*, Centre for Water in the Mineral Industry, University of Queensland, Brisbane, Australia
51. **Ajami, H.,** M.F. McCabe, J.P. Evans, S. Stisen. 2012. Assessing the Impact of Model Spin up on Surface Water-Groundwater Interactions Using an Integrated Hydrologic Model, *Oral Presentation*, American Geophysical Union, 2012 Fall meeting, San Francisco, CA.
52. **Ajami, H.,** M.F. McCabe, J.P. Evans. 2012. Exploring the Role of Groundwater Dynamics on Catchment Scale Land Surface Fluxes, *Oral Presentation*, School of Civil and Environmental Engineering, University of New South Wales
53. **Ajami, H.,** P.A. Troch, T. Maddock III, T. Meixner, J. Hogan. 2010. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments, *Oral Presentation*, International Association of Hydrogeologists, NSW chapter, Sydney, Australia
54. **Ajami, H.** 2010. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments, *Oral Presentation*, School of Civil and Environmental Engineering, University of New South Wales

Conference Presentations (Underlined postdoc advisee, *Graduate student, #Undergraduate student, †Visiting scholar)

1. McDowell, T., M. Bronnikova, I. Bronz, D.R. Hirmas, **H. Ajami,** D. Herrmann, A. Farsad. 2025. Field Application of a Modified Mini Tension-Disk Infiltrometer for Improved Determination of Saturated and Near-Saturated Hydraulic Conductivity of Urban Soils, *Poster Presentation*, CANVAS 2025, Salt Lake City, UT.
2. Rahman, A.T.M., J. Šimůnek, S.A. Bradford, **H. Ajami,** M.B. Meles, L. Chen, A. Szymkiewicz, M. Pawlowicz, A. Casillas, S. Beegum. 2024. An Innovative Multi-Model Coupling Strategy for Simulating Watershed-Scale Surface and Subsurface Flow Interactions, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco

3. Nippert, J.B., A.N. Flores, **H. Ajami**, M.F. Kirk, R. Keen, S.A. Billings, D. Hirmas, P. L. Sullivan. 2024. Long-term Variations in Precipitation Isotopes Reveal a Strong Linkage to Atmospheric Dryness and Continental-scale Moisture Sources, *Oral Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
4. Liu, F., **H. Ajami**, S.A. Billings, A.N. Flores, D. Hirmas, J.B. Nippert, K. Singha, P.L. Sullivan, L. Li. 2024. Legacy Implications of Deforestation on Subsurface Flow Paths and the Production and Export of Dissolved Carbon Species, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
5. Keen, R., S.A. Billings, M. Sprenger, B. Li, **H. Ajami**, M. Amato, R. Araki, O. Crompton, D. Gimenez, J. Groh, D. Hirmas, A. Koop, J.R Nimmo, N. Singh, I. Wiekenkamp, B.M. Wyatt, T. Xu, P.L. Sullivan. 2024. Elucidating Patterns of Preferential Flow Occurrence Across Ecosystems and Soil Profiles to Aid Future Projections of Water Storage and Fluxes, *Oral Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
6. Klamm, L., D. Hirmas, P.L. Sullivan, A.N. Flores, H. Ajami, L. Li, S.A. Billings. 2024. Unraveling How Microbial Biomass Drives Aggregate Lifecycles and Water Flows Through Diverse Soil Profiles, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
7. Wineteer, E. *, **H. Ajami**. 2024. Developing an Empirical Recharge Equation for Mountain Aquifers Using Storage-Discharge Functions, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
8. Singh, N., S.M. Saia, R. Bhattacharya, **H. Ajami**, D.M. Borrok. 2024. Causal Attribution of Groundwater Levels to Drought and Crop Production Across CONUS, *Oral Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
9. Jarecke, K.M., R. Keen, K. Sadayappan, J.B. Nippert, S.A. Billings, D. Hirmas, L. Li, **H. Ajami**, A.N. Flores, M.F. Kirk, K. Singha, P.L. Sullivan. 2024. Woody Encroachment Intensifies Soil Drying at Multiple Temporal Scales, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
10. Silwimba, K., A.N. Flores, C. Becker, L.R. Hawkins, K. Dagon, I. Cionni, P.L. Sullivan, S.A. Billings, **H. Ajami**, D. Hirmas, L. Li, J.B. Nippert, M. Amato. 2024. History Matching with Evidential Deep Neural Networks to Improve Terrestrial Water Storage Simulations in the Community Land Model, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco
11. Li, B., M. Sprenger, B.M. Wyatt, R. Araki, T. Xu, N. Singh, J. Groh, D. Hirmas, A. Koop, **H. Ajami**, D. Giménez, I. Wiekenkamp, R. Keen, M. Amato, O. Crompton, P. Sullivan. 2024. Global Identification and Prediction of Preferential Flow Occurrence in Soils, *Poster Presentation*, American Geophysical Union, 2024 Fall meeting, San Francisco

12. Caplon-Guin, L. [#], **H. Ajami**. 2024. Assessing Surface Water-Groundwater Dynamics in a Mountain Valley Aquifer System in California, *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
13. Amato, M. T., A. Cueva, D.R. Hirmas, **H. Ajami**, A. Nemes, S.A., Billings, A. Flores, L. Li, J. Nippert, A. Rudick, K. Singha, P.L. Sullivan. 2024. Developing a New Generation of Pedo-Transfer Functions to Predict the Depth Distribution of Saturated Hydraulic Conductivity from the Land Surface, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
14. Keen, R., P.L. Sullivan, **H. Ajami**, D.R. Hirmas, L. Li, S.A. Billings. 2024. Cross-Site Variability in Potential Nutrient Returns for Carbon Investment in Root Exudates, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
15. Koop, A. N., D.R. Hirmas, P.L. Sullivan, O. Crompton, **H. Ajami**, S.A. Billings, N. Brunsell, L. Li, A. Cueva, X. Zhang, H. Wen, A. Nemes, L. Faria Tavares de Souza, A. Flores, A. Rudick, A., Guthrie, L. Klamme, M.A. Unruh. 2024. Does Surface and Subsurface Soil Structure Control Macroporosity and Ecohydrology? *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
16. Billings, S. A., P.L. Sullivan, D.R. Hirmas, **H. Ajami**, L. Li, K. Singha, M. Amato, L. Podzikowski, R. Keen, L. Klamme, M.A. Unruh. 2024. Leveraging Depth-Dependent Soil Structural and Biogeochemical Data to Understand Drivers of Transport through Soil Profiles, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
17. Podzikowski, L., D.R. Hirmas, **H. Ajami**, P.L. Sullivan, L., Li, A. Flores, A. Rudick, S.A. Billings. 2024. Interaction Among Climate Variability, Soil Development, and Soil Structure Mediates the Downward Transport of SOC across the Continental US, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
18. Varikuti, V.* , M. Bronnikova, D.R. Hirmas, **H. Ajami**, J.C. Pachon, J. Nippert, P.L. Sullivan, L. Li, S.A. Billings, A. Flores. 2024. Changes in Soil Macro- and Micromorphology As Influenced By Subsurface Shallow Lithic Contact, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX.
19. Acero Triana, J.S., J.A. Pulido[#], **H. Ajami**, K.M. Whitney, E. Vivoni, E.E. Papalexakis. 2024. Enhancing Colorado River Flow Predictions Under Climate Change Scenarios with Machine Learning, *Poster Presentation*, 25th Computational Methods in Water Resources Conference, Tucson, Arizona
20. Rahman, A.T.M.S., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles, L. Chen, A. Szymkiewicz, M. Pawlowicz, A. Casillas-Trasvina, S. Beegum. 2024. A New

Externally Coupled Physically-based Multi-Model Framework for Simulating Subsurface and Overland Flow Hydrological Processes, *Oral Presentation*, 25th Computational Methods in Water Resources Conference, Tucson, Arizona

21. Rahman, A.T.M.S., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles, L. Chen, A. Szymkiewicz, M. Pawlowicz, A. Casillas-Trasvina, S. Beegum. 2024. A New Externally Coupled Physically-based Multi-Model Framework for Simulating Subsurface and Overland Flow Hydrological Processes, *Oral Presentation*, California Water and Environmental Modeling Forum, Folsom, California
22. Acero Triana, J.S., **H. Ajami**, S. Armengol Vall. 2024. Quantifying Groundwater Recharge Processes in the Mountain-Valley Aquifer System of a Highly Managed Watershed, *Oral Presentation*, Geological Society of America Annual Meeting, California
23. Wineteer, E.* , **H. Ajami**. 2024. Spatiotemporal Trends in Mountain Aquifer Recharge, *Poster Presentation*, Geological Society of America Annual Meeting, California
24. Sullivan, P.L., S.A. Bush, G. Goldrich-Middaugh, A.V. Guthrie, K. Johnson, A. Koop, B. Li, A. Khalid Rudick, **H. Ajami**, S. Billings, J. Carey, A. Flores, D.R. Hirmas, K. Jo Jankowski, L. Li, L. Ma, M. Sprenger, J. Ricketts. 2024. Unearthing Controls on Critical Zone Processes from Big Data in the Anthropocene, *Oral Presentation*, 2024 Goldschmidt Conference
25. **Ajami, H.**, J.S. Acero Triana, S. Armengol Vall, R.G. Anderson, D. Wang. 2024. Modeling Groundwater Recharge and Hydrologic Pathways in the Kaweah Basin, California, *Oral Presentation*, 79th SWCS International Annual Conference - CEAP Showcase, Myrtle Beach, SC
26. **Ajami, H.**, J.S. Acero Triana, S. Armengol Vall, R.G. Anderson, D. Wang. 2024. Quantifying Groundwater Recharge in Mountain-Valley Aquifer System of the Kaweah River Watershed, *Oral Presentation*, Toward Sustainable Groundwater in Agriculture – Linking Science & Policy, San Francisco
27. Varikuti, V*., M. Bronnikova, D.R. Hirmas, **H. Ajami**, J. Pachon, J.C. Nippert, P.L. Sullivan, L. Li, S.A. Billings, S. A., A. Flores. 2024. Assessing the Influence of Shallow Lithic Contacts on Soil Structure and Hydraulic Properties. Soil Science Society of America 2024 Summer Conference, San Juan, PR.
28. Lily Caplon-Guin[#], **H. Ajami**. 2024. Surface Water-Groundwater Dynamics in a California Mountain Valley Aquifer System, *Poster Presentation*, UCR Undergraduate Research & Creative Activities Symposium, May 2024

29. Gonzalez, V.[#], **H. Ajami**. 2024. Surface Water and Groundwater Chemistry Variability in the Southern Sierra Nevada, *Poster Presentation*, California Plant and Soil Conference, Fresno, CA.
30. Pulido, J.A.[#], J.S. Acero Triana, **H. Ajami**. 2024. Bias Correcting Simulated Streamflow by Utilizing Machine Learning, *Poster Presentation*, California Plant and Soil Conference, Fresno, CA. **Second best poster award
31. **Ajami, H.**, J.S. Acero Triana, E. Wineteer*, S. Armengol Vall, S. Lee, J. Palmer*. 2024. Understanding Surface Water-Groundwater Interactions from Local to Continental Scales, *Oral Presentation*, W4188 Multistate meeting, Las Vegas
32. Wineteer, E*., **H. Ajami**. 2023. Quantifying Mountain Aquifer Recharge in the Sierra Nevada Using Storage-Discharge Functions, *Poster Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
33. Guthrie, A., P.L. Sullivan, M.F. Kirk, T.D. Loecke, C.W. Rice, B.A. Sikes, M. Unruh, L.F. Tavares de Souza, D. Hirmas, L. Li, **H. Ajami**, K. Singha, L.M. Klam, S.A. Billings. 2023. Surficial Soil Changes and Precipitation Patterns Interact to Govern Propagation of Deep Soil Solutes Produced by Weathering, *Oral Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
34. Acero Triana, J.S., **H. Ajami**, S. Armengol Vall. 2023. Quantifying the Relative Contribution of Mountain Front & Mountain Block Recharge to the Valley-Fill Aquifer of a Complex Agroecosystem: Integrating Hydrometric and Isotope Data into a High-Resolution Hydrologic Model, *Poster Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
35. Meles, M.B., L. Chen, C.C. Unkrich, **H. Ajami**, S.A. Bradford, J. Simunek. 2023. Scaling up A Hillslope Scale Coupled Surface-Subsurface Hydrological Model to Watershed Scale: A Computationally Efficient Modeling Framework, *Poster Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
36. Sullivan, P.L., L. Bixby, V. Moreno, K.M. Jarecke, K. Sadayappan, R. Keen, A. Guthrie, L. Faria Tavares de Souza, E. Hauser, X. Zhang, **H. Ajami**, H.R. Barnard, S.A. Billings, A. Flores, D. Hirmas, M.F. Kirk, L. Li, J.B. Nippert, K. Singha. 2023. Constraining the Belowground Ecohydrologic Consequences of Land Cover Change, *Invited Oral Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
37. Billings, S.A., Z.S. Brecheisen, X. Li, E. Hauser, L.F. Tavares de Souza, P. Sullivan, **H. Ajami**, A.N. Flores, D. Hirmas, L. Li, T. Michaels, K. Singha. 2023. Throughout Earth's Mountainous Terrain, Forest Productivity Responses to Aspect in the Anthropocene Are Migrating, *Oral Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco

38. Jarecke, K.M., R. Keen, K. Sadayappan, V. Moreno, B. Li, M. Dumont, D. Hirmas, J. B. Nippert, **H. Ajami**, S.A. Billings, L. Li, A.N. Flores, X. Zhang, K. Singha, P. Sullivan. 2023. Impacts of Woody Encroachment on Soil Hydrology: Insights From Root Distribution, Soil Moisture Time Series, and Electrical Resistivity Imaging, *Poster Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
39. Unruh, M., P. Sullivan, S.C. Hart, **H. Ajami**, W.H. McDowell, J. Chorover, W.L. Silver, K.A. Lohse, J.R. Gerson, M. Swenson, Y. Yang, D. Hirmas, A.N. Flores, A. Guthrie, K. Singha, S.A. Billings. 2023. How Moisture Availability Across Climate Zones, Landscapes, and Pedons Governs Soil Organic C Spatial Heterogeneity and Transport to Deep Horizons, *Oral Presentation*, American Geophysical Union, 2023 Fall meeting, San Francisco
40. Meles, M.B., L. Chen, **H. Ajami**, S.A. Bradford, J. Simunek. 2023. Scaling up A Hillslope Scale Coupled Surface-Subsurface Hydrological Model to Watershed Scale: A Computationally Efficient Modeling Framework, *Oral Presentation*, Geological Society of America Meeting, Pittsburgh
41. Chen, L., J. Simunek, S. Bradford, **H. Ajami**, M. Meles. 2023. A Novel Computationally Efficient Hydrologic Modeling Framework to Simulate Water, Solute, and Sediment Transport at the Hillslope Scale, *Oral Presentation*, Geological Society of America Meeting, Pittsburgh
42. Pachon, J., D.R. Hirmas, **H. Ajami**, P.L. Sullivan, S.A. Billings, K. Jarecke, M. Sena, X. Zhang, L. Li, K. Singha, J. Nippert, A. Flores, X. Cao, A. Nemes. 2023. Incorporating Structural Macropores into Dual Porosity Water Retention Pedotransfer Functions, *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO.
43. Duro, A.M. *, D.R. Hirmas, **H. Ajami**. 2023. A Novel Method for Removing the Influence of Surface Roughness from VNIR Reflectance Spectra to Advance Simultaneous Investigations of Soil Organic Carbon and Soil Structure on Intact Samples, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO.
44. Varikuti, V. *, D.R. Hirmas, **H. Ajami**, S.A. Billings, A. Flores, L. Li, J. Nippert, J. Pachon, P.L. Sullivan. 2023. Influence of Subsurface Boundary Conditions on Soil Physical and Hydrological Properties, *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO.
45. Tomar, S. *, D.R. Hirmas, R.C. Graham, M. Cole, **H. Ajami**, A. Gray, E. Blake. 2023. Genesis and Distribution of Soils in the Arid White Mountains of Eastern California, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO.
46. Wyatt, B.M., B. Li, **H. Ajami**, R. Araki, O. Crompton, D. Gimenez, J. Groh, D.R. Hirmas, J.R. Nimmo, N. Singh, M. Sprenger, P.L. Sullivan, I. Wickenkamp, T. Xu.

2023. Utilizing High-Frequency Soil Moisture Measurements for Detection and Prediction of Preferential Flow, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO.
47. Gonzalez, V.[#], **H. Ajami**. 2023. Surface Water and Groundwater Chemistry in the Southern Sierra Nevada, *Poster Presentation*, UCR Summer RISE Symposium, September 2023, UC Riverside
48. Caplon-Guin, L.[#], E. Wineteer*, **H. Ajami**. 2023. Climatological and Agricultural Influence on California Groundwater Trends, *Poster Presentation*, Summer RISE Symposium, September 2023, UC Riverside
49. Pulido, J.A.[#], J.S. Acero Triana, **H. Ajami**. 2023. Bias Correcting Simulated Streamflow by Utilizing Machine Learning, *Poster Presentation*, Summer RISE Symposium, September 2023, UC Riverside
50. Jarecke, K.M., K. Singha, J.B. Nippert, V. Moreno, D.H. Hirmas, **H. Ajami**, J.C. Pachon, R.M. Keen, S. Billings, L. Li., A. Flores, K. Sadayappan, X. Zhang, P.L. Sullivan. 2023. Illuminating Soil Hydrologic Processes in a Woody-encroached Tallgrass Prairie Using Electrical Resistivity Imaging and Soil Moisture Data, *Poster Presentation*, Eight Interagency Conference on Research in the Watersheds (ICRW8), Corvallis, OR.
51. Bonan, L., M. Sprenger, T. Xu, J. Nimmo, **H. Ajami**, R. Araki, O. Crompton, D. Gimenez, J. Groh, D. Hirmas, N. Singh, B. Wyatt, P.L. Sullivan. 2023. Inferring Spatial and Temporal Drivers of Subsurface Preferential Flow Using Machine Learning Based on High-frequency Multi-depth Soil Moisture Observations, *Poster Presentation*, Eight Interagency Conference on Research in the Watersheds (ICRW8), Corvallis, OR.
52. Sullivan, P. L., V. Moreno, K. Johnson, A. Duro*, K. Jarecke, A. Redlins, R. Gregory, H. Barnard, K. Singha, L. Klammer, A. Guthrie, F.S.T. Liu, K. Silwimba, M. Unruch, **H. Ajami**, S. Billings, A. Flores, D. Hirmas, L. Li. 2023. How Will Climate and Land Cover Disturbance Influence Water and Carbon Cycles in the Critical Zone? Applying an Ecohydrologic Perspective toward H.J. Andrews, *Oral Presentation*, Eight Interagency Conference on Research in the Watersheds (ICRW8), Corvallis, OR.
53. Sullivan, P. L., **H. Ajami**, H. Barnard, S. Billings, A. Flores, D. Hirmas, L. Li, J. Nippert, K. Singha, A. Cueva, A. Duro*, R. Gregory, A. Guthrie, E. Hauser, K. Jarecke, K. Johnson, R. Keen, L. Klammer, A. Koop, A. Knapp, F.S.T. Liu, J. Pachon, V. Moreno, K., Sadayappan, K. Silwimba, L. Souza, A. Redlins, M. Unruch, V. Varikuti*, L. Wang, H. Wen, X. Zhang. 2023. How Do Roots Restructure Water and Carbon Dynamics in the Critical Zone? *Oral Presentation*, European Geosciences Union General Assembly 2023, Austria

54. Wineteer, E. *, **H. Ajami**. 2023. Estimating Mountain Aquifer Recharge: A Generalized Recession-based Technique, *Poster Presentation*, 2023 CUAHSI Biennial Colloquium, Lake Tahoe, CA
55. Pachon, J., D. Hirmas, **H. Ajami**, P. Sullivan, S. Billings, M. Sena, X. Zhang, L. Li, K. Jarecke, K. Singha, J. Nippert, A. Flores, X. Cao. 2023. Visible to the Eye, Now in the Model: Parameterizing Dual Porosity Water Retention Functions in Structured Soils, *Poster Presentation*, European Geosciences Union General Assembly 2023, Austria
56. **Ajami, H.** 2023. Quantifying Groundwater Recharge Dynamics in Response to Climate Variability, *Oral Presentation*, W4188 Annual Meeting, Las Vegas
57. Yuan, Y., **H. Ajami**, R.G. Anderson, D. Wang, J. Kelley, L. Wang. 2022. Quantifying Citrus Plant Water Use by Evapotranspiration Partitioning Using In-Situ Measurements, *Poster Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
58. Chen, L., S.A. Bradford, J. Simunek, **H. Ajami**, M.B. Meles. 2022. A Computationally Efficient Hydrologic Modeling Framework to Simulate Surface Runoff and Vertical Infiltration at the Hillslope Scale, *Oral Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
59. Armengol Vall, S., **H. Ajami**. 2022. Quantifying the Connectivity between the Sierra Nevada and Central Valley Aquifer using $\delta^{13}\text{C}$ and ^{14}C Carbon Isotopes, *Poster Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
60. Wineteer, E. *, **H. Ajami**. 2022. Estimating Mountain Aquifer Recharge in the Sierra Nevada Using a Data Driven Method, *Poster Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
61. Acero Triana, J.S., **H. Ajami**, S. Armengol Vall. 2022. Quantifying Mountain System Recharge Contribution to Valley-Fill Aquifers in Complex Agroecosystems— Integrating High Spatiotemporal Resolution Hydrological Modeling and Isotope Data, *Oral Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
62. Acero Triana, J.S., **H. Ajami**, S. Razavi. 2022. Uncertainty and Sensitivity Analyses of a Semi-Distributed Non-Parsimonious Hydrologic Model Across Spatial and Temporal Scales Using New and Traditional Global Sensitivity Analysis Approaches, *Oral Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago
63. Li L., H. Wen, P.L. Sullivan, S.A. Billings, **H. Ajami**, A. Cueva, A.N. Flores, D. Hirmas, A.N. Koop, K. Joyce Murenbeeld, X. Zhang. 2022. From Soils to Streams: Connecting Terrestrial Carbon Transformation, Chemical Weathering, and Solute Export Across Hydrological Regimes, *Oral Presentation*, American Geophysical Union, 2022 Fall meeting, Chicago

64. Moreno, V., P.L. Sullivan, A. Duro*, D.R. Hirmas, S.A. Billings, **H. Ajami**, L. Li, K. Jarecke, V.L. Bailey.2022. Do Indirect Effects of Forest Stand Age and Aspect Govern SOC Stability Via Their Influence on Soil Aggregate Development? *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD.
65. Duro, A. M. *, D.R. Hirmas, **H. Ajami**, D. Giménez, S.A. Billings, P.L. Sullivan, X. Zhang, A. Flores, L. Li, V. Moreno. 2022 Topographic Correction of Proximally-Sensed, High-Resolution VisNIR Soil Spectra for Horizon-Scale Carbon Mapping, *Oral Presentation*. ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD.
66. Hirmas, D.R., X. Zhang, P.L. Sullivan, **H. Ajami**, S.A. Billings, M.G. Sena, L. Faria Tavares de Souza, L. Li, J.C. Pachon, A. Flores.2022. Predicting Rapid Macroporosity and Hydraulic Conductivity Response to Soil Moisture, *Oral Presentation*, ASA, CSSA, SSSA International Annual Meeting
67. Guthrie, A.V., D. Hirmas, P.L. Sullivan, K. Singha, A. Flores, J. Nippert, L. Li, H. Wen, **H. Ajami**, S. Billings.2022. Evidence for Rapid and Wide-spread Root-induced Soil Structural Changes in Response to Land use, *Poster Presentation*, Goldschmidt 2022 Hawaii, <https://conf.goldschmidt.info/goldschmidt/2022/meetingapp.cgi/Paper/8898>
68. Duro, A. M. *, D.R. Hirmas, **H. Ajami**, D. Giménez, S.A. Billings, P.L. Sullivan, X. Zhang, A. Flores, L. Li, V. Moreno.2022. Topographic Correction of Proximally Sensed, High Resolution VisNIR Soil Spectra for Horizon-Scale Chemomapping, *Oral Presentation*, UC GIS Week, CA.
69. Boomer, K.B., **H. Ajami**, W.H. Yang. 2022. Prospects for Advancing Science-based Decision-making to Meet Food Supply and Agricultural Sustainability Goals Through Next-gen Flux Networks, *Oral Presentation*, Frontiers in Hydrology Meeting, June 2022 meeting, San Juan, Puerto Rico
70. Schreiner-McGraw, A., **H. Ajami**, R. Anderson, J.D. Wood, D. Wang.2022. Integrating Flux Partitioning and Eddy covariance to Improve Vegetation Parameterization in a Coupled Land Surface-groundwater Model, *Oral Presentation*, Frontiers in Hydrology Meeting, San Juan, Puerto Rico
71. Stephens, C.[†], L. Marshall, F. Johnson, L. Lin, L. Band, **H. Ajami**. 2022. Can Examining Past Variability Help Us Understand Catchment Response to Future Climate Change? *Oral Presentation*, EGU General Assembly 2022, Vienna, Austria.
72. **Ajami, H.** 2022. Understanding Groundwater Response to Meteorological Droughts Using Data Driven and Integrated Modeling Approaches, *Online Oral Presentation*, W4188 Annual Meeting Virtual January 2022

73. Schreiner-McGraw, A., H. Ajami, R. Anderson, J. Kelley, D. Wang.2021. Integrating Eddy Covariance and Remotely Sensed Data to Improve Vegetation Parameterization in a Coupled Land Surface-Groundwater Model, *e-Lightening Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
74. Schreiner-McGraw, A., H. Ajami.2021. Propagation of Precipitation and Temperature Dataset Uncertainty from Headwaters to Groundwater in the Sierra Nevada, California. *Oral Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
75. Acero Triana, J.S., H. Ajami.2021. Identifying Major Hydrologic Change Drivers in a Transboundary Highly Managed Endorheic Basin: Integrating Hydro-ecological Models and Time Series Data Mining Techniques, *Online Poster Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
76. Armengol Vall, S., H. Ajami, H., J. O'Sickman.2021. Characterizing Temporal and Spatial Variability of Mountain System Recharge Processes in the Sierra Nevada, California, *Poster Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
77. Wen, H., P. Sullivan, S.A. Billings, **H. Ajami**, A. Cueva, A.N. Flores, D. Hirmas, A.N. Koop, K.J. Murenbeeld, X. Zhang, others.2021. The Predominant Control of Hydroclimatic Conditions on Carbon and Weathering Fluxes at the Hillslope Scale, *Oral Presentation*, American Geophysical Union, 2021 Fall meeting
78. Hirmas, D., X. Zhang, P. Sullivan, S.A. Billings, L. Souza, L. Li, **H. Ajami**, M.G. Sena, A.N. Flores.2021. A Novel Method for Predicting Rapid Changes in Soil Structure and Hydraulic Conductivity, *Poster Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
79. Band, L.E., C. Stephens, L.A. Marshall, F. Johnson, **H. Ajami**, L. Lin.2021. Investigating Spatial Patterns and Variability in Catchment Response to Climate Change Using a Virtual Experiment Approach, *Oral Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
80. Sullivan, P.L., S.A. Billings, D. Hirmas, L. Li, **H. Ajami**, A.N. Flores, K. Singha, H.R. Barnard, E. Hauser, A.N. Koop, others. 2021. When and Where Do Top-down Processes Govern Critical Zone Structure and Feedback to Influence Climate? *Oral Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
81. Billings, S.A., P. Sullivan, D. Hirmas, A. Guthrie, L.F.T. de Souza, E. Hauser, H. Wen, L. Li, D. deB Richter, E.L. Aronson, **H. Ajami**, H.R. Barnard, J.B. Nippert, K. Singha, A.N. Flores, L. Bixby. 2021. Roots as Agents of Rapid Soil Structural Change in the Anthropocene, *Oral Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans

82. Zipper, S.C., W.H. Farmer, A.E. Brookfield, **H. Ajami**, H.W. Reeves, C. Wardropper, J.C. Hammond, T. Gleeson, J.M. Deines.2021. Quantifying Streamflow Depletion for Science-Based Water Management: Challenges and Emerging Approaches, *Poster Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
83. Cowger, W., A. Gray, **H. Ajami**. 2021.Litter Transport, Accumulation, and Source Dynamics on Urban Roadsides of the Inland Empire, California, *Oral Presentation*, American Geophysical Union, 2021 Fall meeting, New Orleans
84. Aiken, M., M. Ramachandran, S. Ying, K.A. Schwabe, **H. Ajami**.2021. Predicting Human Exposure to Geogenic Manganese Via Groundwater in California's Central Valley, *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting.
85. Duro, A.M. *, D.R. Hirmas, **H. Ajami**, D. Giménez, S.A. Billings, P.L. Sullivan, X. Zhang, L. Li, A. Flores.2021. A Visnir Spectroscopy Calibration Library for Mapping High-Resolution, Horizon-Scale Chemistry of Rough Soil Surfaces, *Poster Presentation*, ASA, CSSA, SSSA International Annual Meeting.
86. Burgess, W.[#], **H. Ajami**, A. Schreiner-McGraw. 2021. Groundwater Response to Precipitation Droughts, *Oral Presentation*, UCR Summer RISE Symposium
87. Sullivan, P., S. Billings, L. Li, J. Nippert, H. Wen, X. Zhang, V. Moreno, K. Sadayappan, R. Keen, D. Hirmas. Others. 2021. Do Root-Regolith-Rock Interactions Govern Critical Zone-climate Feedbacks Over Decades to Centuries? *Online Oral Presentation*, Goldschmidt2021, July 2021.
88. Acero Triana, J.S., **H. Ajami**. 2021. Understanding the Hydrologic Response Mechanisms of California's Largest Lake in a Highly Managed Endorheic Basin, *Online Oral Presentation*, European Geosciences Union General Assembly 2021.
89. Schreiner-McGraw, A., **H. Ajami**. 2021. Subsurface Mechanisms Control Hydrologic Response to a Multi-Year Drought in a Mountainous Watershed with a Mediterranean Climate, *Online Presentation*, European Geosciences Union General Assembly 2021.
90. **Ajami, H.**, A. Schreiner-McGraw.2021. Quantifying Mountain Aquifer Recharge Rates Using Storage-Discharge Functions in the Sierra Nevada, California, *Online Oral Presentation*, European Geosciences Union General Assembly 2021.
91. **Ajami, H.** 2021. Ecohydrologic Processes of Irrigated Agriculture Influence Lake-Groundwater Interactions in a Highly Managed Watershed, *Online Oral Presentation*, NSF-sponsored Convergence Accelerator Conference for Food Security in Extreme Environments and Food Deserts
92. **Ajami, H.** 2021.Ecohydrologic Processes of Irrigated Agriculture Influence Lake-Groundwater Interactions in a Highly Managed Watershed, *Online Oral Presentation*, W4188 Annual Meeting Virtual, May 2021

93. Stephens, C. †, L. Lin, L.A. Marshall, F. Johnson, L.E. Band, **H. Ajami**.2020. Spatial Variation and Feedbacks in Simulated Ecohydrologic Response to Climate Change, *Online Presentation*, American Geophysical Union, 2020 Fall meeting
94. Schreiner-McGraw, A., **H. Ajami**. 2020. Propagation of Meteorological Variability from Atmosphere to Groundwater, *Online Poster Presentation*, American Geophysical Union, 2020 Fall meeting
95. Ehsani, K. *, **H. Ajami**, A. Schreiner-McGraw.2020. Estimating Mountain System Recharge Using Recession Flow Analysis in The Sierra Nevada, California, *Online Poster Presentation*, American Geophysical Union, 2020 Fall meeting
96. **Ajami, H.**, A. Schreiner-McGraw. 2020. Characterizing Groundwater Response Time to Droughts Across the United States, *Online Oral Presentation*, European Geosciences Union General Assembly 2020
97. Jha, A. *, **H. Ajami**, A. Schreiner-McGraw. 2019. Understanding the Future of California's Largest Lake: Evaluating SWAT's Lake Delineation Methods to Quantify the Water Budget of a Highly Managed Watershed, *Poster Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA
98. Palmer, J. *, A. Schreiner-McGraw, **H. Ajami**. 2019. Characterizing Aquifer and Meteorologic Controls on Groundwater Response Time to Droughts, *Poster Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA
99. Stephens, C., L. Marshall, F. Johnson, L. Lin, L.E. Band, **H. Ajami**. 2019. Understanding Model Robustness to Climate Change: An Experiment with the Ecohydrologic Model RHESSys, *Poster Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA
100. **Ajami, H.**, A. Schreiner-McGraw. 2019. Quantifying Groundwater Response Time to Droughts Across the United States, *Oral Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA
101. Schreiner-McGraw, A., E.R. Vivoni, **H. Ajami**, O. Sala, H. Throop, D. Peters. 2019. Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets, *Oral Presentation*, American Geophysical Union, 2019 Fall meeting, San Francisco, CA
102. Schreiner-McGraw, A., **H. Ajami**. 2019. Delayed Response of Groundwater to Droughts and Implications for a Warmer Climate, *Oral Presentation*, Geological Society of America 2019 Annual Meeting, Phoenix, Arizona

103. Schreiner-McGraw, A., H. Ajami, E. Vivoni. 2019. Shrub Encroachment and Climate Change Controls on Mountain Front Recharge in Drylands, *Oral Presentation*, Geological Society of America 2019 Annual Meeting, Phoenix, Arizona
104. Jha, A. *, **H. Ajami**, A. Schreiner-McGraw. 2019. Understanding Hydrologic Response of and Arid, Irrigated Watershed to Changing Climate Using a Watershed Scale Model, *Poster Presentation*, Wildland Urban Interfaces: Expanding Perspectives in Southern California, Riverside, CA
105. Jha, A. *, **H. Ajami**, and A. Schreiner-McGraw. 2019. Understanding Hydrologic Response of and Arid, Irrigated Watershed to Changing Climate Using a Watershed Scale Model, *Poster Presentation*, UCR EDGE Institute Spring Symposium, Riverside, CA
106. Schreiner-McGraw, A., H. Ajami. 2019. Propagation of Surface Changes Through the Critical Zone to the Groundwater, *Oral Presentation*, W3188 Multistate Annual Meeting, Riverside, CA
107. Jha, A. *, **H. Ajami**. 2019. Exploring Clustering to Discern Representative Hillslope Properties in a Coarse Grid, *Poster Presentation*, W3188 Multistate Annual Meeting, Riverside, CA
108. Schweiger, M. *, A. Schreiner-McGraw, **H. Ajami**. 2019. Hydrological Response Timing of the Kaweah Basin to Drought Onset and Termination, *Poster Presentation*, W3188 Multistate Annual Meeting, Riverside, CA
109. **Ajami, H.** 2019. Development of a Semi-Distributed Hydrologic Modeling Framework for Catchment Scale Simulations, *Oral Presentation*, W3188 Multistate Annual Meeting, Riverside, CA
110. **Ajami, H.**, A. Sharma. 2019. Comparison of Multiple Approaches for Disaggregating Soil Moisture to Finer Spatial Resolutions, *Oral Presentation*, SSSA International Soils Meeting, 2019 meeting, San Diego, CA
111. **Ajami, H.**, M. Sadegh. 2018. Quantifying Uncertainty of Semi-distributed Hydrologic Model Simulations for Catchment Scale Applications, *Poster Presentation*, American Geophysical Union, 2018 Fall meeting, Washington D.C.
112. Tang, Y., L.A. Marshall, A. Sharma, **H. Ajami**. 2018. Using Satellite Information to Define Output Uncertainties for Bayesian Ecohydrological Modelling, *E-Lightening Presentation*, American Geophysical Union, 2018 Fall meeting, Washington D.C.
113. Schreiner-McGraw, A. **H. Ajami**. 2018. Drought Impacts on Hydrologic Connectivity of a Coupled Mountain Agricultural System, *E-Lightening Presentation*, American Geophysical Union, 2018 Fall meeting, Washington D.C.

114. **Ajami, H.** 2018. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments, *Oral Presentation*, GRA's Western Groundwater Congress, Sacramento, CA
115. **Ajami, H.** 2018. Assessing the Impacts of Climate Change on Groundwater Recharge - A Recent Synthesis, *Poster Presentation*, UC Water Annual Meeting, Sacramento, CA
116. **Ajami, H.** 2018. Development of a Semi-Distributed Hydrologic Modeling Framework for Catchment Scale Simulations, *Oral Presentation*, W3188 Multistate Annual Meeting, Las Vegas, Nevada
117. **Ajami, H., A. Sharma, V. Lakshmi.** 2017. On the Fidelity of Semi-distributed Hydrologic Model Simulations for Large Scale Catchment Applications, *Poster Presentation*, American Geophysical Union, 2017 Fall meeting, New Orleans, Louisiana
118. Marshall, L.A., Y. Tang, **H. Ajami, A. Sharma.** 2017. Multi-objective Uncertainty Analysis of Ecohydrological Systems: A Bayesian Approach, *Oral Presentation*, American Geophysical Union, 2017 Fall meeting, New Orleans, Louisiana
119. Tang, Y, L.A. Marshall, A. Sharma, **H. Ajami.** 2017. Bayesian Multi-Objective Calibration and Uncertainty Analysis in Ecohydrological Modeling, *Oral Presentation*, 22nd International Congress on Modelling and Simulation (MODSIM2017), Tasmania, Australia
120. Kim, S., H. Ajami, A. Sharma. 2017. Incorporating an Operational Satellite-derived Leaf Area Index into a Computationally Efficient Semi-distributed Hydrologic Modelling Application (SMART), *Poster Presentation*, 22nd International Congress on Modelling and Simulation (MODSIM2017), Tasmania, Australia
121. Neff, K., T. Meixner, L. De La Cruz, **H. Ajami.** 2017. Seasonality of Groundwater Recharge in the Basin and Range Province, Western North America, *Oral Presentation*, Geological Society of America 129th Annual Meeting, Seattle, Washington
122. **Ajami, H., A. Sharma.** 2016. From Sub-basin to Grid Scale Soil Moisture Disaggregation in SMART, A Semi-distributed Hydrologic Modeling Framework, *Poster Presentation*, American Geophysical Union, 2016 Fall meeting, San Francisco, CA
123. Tang, Y, L.A. Marshall, A. Sharma, **H. Ajami.** 2016. Uncertainty Analysis for a Bayesian Multi-objective Ecohydrological Study, *Poster Presentation*, American Geophysical Union, 2016 Fall meeting, San Francisco, CA

124. **Ajami, H.**, A. Sharma. 2016. SMART: A New Semi-distributed Hydrologic Modelling Framework for Soil Moisture and Runoff Simulations, *Oral Presentation*, European Geophysical Union, 2016 General Assembly, Vienna, Austria
125. **Ajami, H.**, A. Sharma. 2016. Mapping Spatial Variability of Soil Moisture in a Semi-distributed Hydrologic Modelling Framework, *Poster Presentation*, European Geophysical Union, 2016 General Assembly, Vienna, Austria
126. Naseem, B.* , **H. Ajami**, I. Cordery, A. Sharma. 2016. On the Performance of Alternate Conceptual Ecohydrological Models for Streamflow Prediction, *Poster Presentation*, European Geophysical Union, 2016 General Assembly, Vienna, Austria
127. **Ajami, H.**, U. Khan, N.K. Tuteja, A. Sharma. 2015. SMART: Soil Moisture and Runoff Toolkit for Semi-distributed Hydrologic Modeling, *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
128. Khan, U.* , **H. Ajami**, N.K. Tuteja, A. Sharma. 2015. Sensitivity of Soil Moisture and Runoff Dynamics to Hydrologic Response Unit Delineations in SMART, *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
129. Liu, Y., R. Parinussa, **H. Ajami**, J.P. Evans, M.F. McCabe, A. Sharma. 2015. The Evaluation of an Integrated Land Surface – Groundwater Model Through Remote Sensing, *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
130. Neff, K., T. Meixner, **H. Ajami**, L. De La Cruz. 2015. Seasonality of Groundwater Recharge in the Basin and Range Province, Western North America, *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
131. Niraula, R., T. Meixner, M. Rodell, **H. Ajami**, D. Gochis, C.L. Castro. 2015. How Might Recharge Change Under Projected Climate Change in Western US? *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
132. Tang, Y., L. Marshall, A. Sharma, **H. Ajami**. 2015. A Bayesian Alternative for Multi-objective Ecohydrological Model Specification, *Poster Presentation*, American Geophysical Union, 2015 Fall meeting, San Francisco, CA
133. **Ajami, H.**, A. Sharma, L.E. Band, J.P. Evans, N.K. Tuteja, G. Amirthanathan, M. Bari. 2015. On the Nonstationarity of Hydrological Response in Anthropogenically Unaffected Catchments: An Australian Perspective, *Oral Presentation*, 21st International Congress on Modelling and Simulation (MODSIM2015), Goldcoast, Australia
134. **Ajami, H.**, U. Khan, N.K. Tuteja, A. Sharma. 2015. Soil Moisture and Runoff simulation Toolkit (SMART): A New Framework for Semidistributed Hydrologic

Modeling, *Oral Presentation*, 21st International Congress on Modelling and Simulation (MODSIM2015), Goldcoast, Australia

135. Naseem, B. *, **H. Ajami**, I. Cordery, A. Sharma. 2015. Assessment and Comparison of Alternate Conceptual Ecohydrological Models, *Oral Presentation*, 21st International Congress on Modelling and Simulation (MODSIM2015), Goldcoast, Australia
136. Neff, K., **H. Ajami**, T. Meixner. 2015. Evaluation of the Normalized Seasonal Wetness Index (NSWI) for Seasonalizing Estimates of Groundwater Recharge in Semi-Arid Western U.S. Basins from Climatic Data, *Poster Presentation*, 95th American Meteorological Society Annual Meeting, Phoenix, Arizona
137. **Ajami, H.**, M.F. McCabe, J.P. Evans, S. Stisen. 2014. Assessing Sensitivity of Surface Water-Groundwater Exchanges to Model Initialization, *Poster Presentation*, American Geophysical Union, 2014 Fall meeting, San Francisco, CA
138. Khan, U. *, **H. Ajami**, N.K. Tuteja, A. Sharma. 2014. Delineating Equivalent Cross-Sections for Semi-Distributed Hydrologic Modelling at Large Scales, *Poster Presentation*, American Geophysical Union, 2014 Fall meeting, San Francisco, CA
139. Sharma, A., U. Khan*, N.K. Tuteja, **H. Ajami**. 2014. Are Equivalent Cross Sections the Answer to the Computational Woes of Distributed Hydrologic Modelling? *Invited Oral Presentation*, American Geophysical Union, 2014 Fall meeting, San Francisco, CA
140. Niraula, R., T. Meixner, **H. Ajami**, M. Rodell, D.J. Gochis, C.L. Castro. 2014. Evaluating Recharge Estimates of Three LSMs Across the Western U.S., *Poster Presentation*, American Geophysical Union, 2014 Fall meeting, San Francisco, CA
141. Meixner, T., A.H. Manning, D.A. Stonestrom, **H. Ajami**, D.M. Allen, K. Blasch, A.E. Brookfield, C.L. Castro, J.F. Clark, A.L. Flint, K. Neff, R. Niraula, M. Rodell, B.R. Scanlon, K. Singha, M.A. Walvoord. 2014. Implications of Prospective Climate Change for Groundwater Recharge in the Western United States, *Oral Presentation*, American Geophysical Union, 2014 Fall meeting, San Francisco, CA
142. Khan, U. *, N.K. Tuteja, **H. Ajami**, A. Sharma. 2014. An Equivalent Cross-section Framework for Improving Computational Efficiency in Distributed Hydrologic Modelling, *Oral Presentation*, European Geophysical Union, 2014 General Assembly, Vienna, Austria
143. Guan, H., X. Xu, Z. Ding, Z. Deng, C. Simmons, J. Hutson, A. Love, **H. Ajami**. 2014. Responses of Groundwater Recharge to Land-cover Changes and Climate Variability, *Poster Presentation*, European Geophysical Union, 2014 General Assembly, Vienna, Austria

144. **Ajami, H.**, J.P. Evans, M.F. McCabe, S. Stisen. 2013. How Can the Required Spin-up Time of Integrated Hydrologic Models Be Reduced? *Poster Presentation*, American Geophysical Union, 2013 Fall meeting, San Francisco, CA
145. Sharma, A., U. Khan*, N.K. Tuteja, **H. Ajami**. 2013. Equivalent Cross Sections - A Computationally Efficient Alternative for Distributed Hydrological Modelling, *Poster Presentation*, American Geophysical Union, 2013 Fall meeting, San Francisco, CA
146. Comunion, A., **H. Ajami**, B.F. Kelly. 2013. Quantifying Groundwater Recharge from Floods in Semi-Arid Environments, *Poster Presentation*, American Geophysical Union, 2013 Fall meeting, San Francisco, CA
147. Khan, U.*, N.K. Tuteja, **H. Ajami**, A. Sharma. 2013. An Equivalent Cross-section Framework for Reducing Computational Time in Distributed Hydrologic Modelling, *Oral Presentation*, 20th International Congress on Modelling and Simulation, MODSIM 2013, Adelaide, Australia
148. Meixner, T., **H. Ajami**, K. Neff. 2013. Seasonality of Recharge Mechanisms in the Basin and Range of North America, *Invited Oral Presentation*, Geological Society of America, 125th Anniversary Annual Meeting and Expo, Denver, Colorado
149. **Ajami, H.**, M.F. McCabe, J.P. Evans. S. Stisen. 2013. Sensitivity of Surface Water-Groundwater Exchange to Model Initialization, *Oral Presentation*, 40th International Association of Hydrogeologists (IAH) Conference, Perth, Australia
150. **Ajami, H.**, M.F. McCabe, J.P. Evans. T. Bernardi. 2013. On the Impact of Climate Variability on Surface Water-Groundwater Interactions at the Catchment Scale, *Poster Presentation*, 40th International Association of Hydrogeologists (IAH) Conference, Perth, Australia
151. Ershadi, A., **H. Ajami**, M.F. McCabe, Y. Liu. 2013. Improving Groundwater Recharge Estimation by Using Remote Sensing Derived Evapotranspiration, *Oral Presentation*, 40th International Association of Hydrogeologists (IAH) Conference, Perth, Australia
152. Naseem, B.*, A. Sharma, **H. Ajami**, I. Cordery. 2013. Ecohydrological Simulation Models- A Comparison of Associated Uncertainties in a Bayesian Framework, *Oral Presentation*, Asia Oceania Geosciences Society, Brisbane, Australia
153. Khan, U.*, N.K. Tuteja, **H. Ajami**, A. Sharma. 2013. Equivalent Cross-section: A Novel Approach for Reducing Computational Time in Distributed Hydrologic Modeling, *Oral Presentation*, Asia Oceania Geosciences Society, Brisbane, Australia
154. **Ajami, H.**, M.F. McCabe, J.P. Evans. 2013. Exploring Dynamics of Land Surface-Subsurface Coupling Under Change, *Poster Presentation*, European Geophysical Union, 2013 General Assembly, Vienna, Austria

155. **Ajami, H.**, M.F. McCabe, J.P. Evans. 2012. Sensitivity of Groundwater Dynamics to Land Cover Change, *Poster Presentation*, American Geophysical Union, 2012 Fall meeting, San Francisco, CA
156. Khan, U.*, N.K. Tuteja, **H. Ajami**, A. Sharma. 2012. How to Reduce Computational Time in Distributed Hydrological Modeling? *Poster Presentation*, American Geophysical Union, 2012 Fall meeting, San Francisco, CA
157. Graham, P.W., M.F. McCabe, **H. Ajami**. 2012. Influence of High Level Long Duration Dam Release on Stream-Aquifer Interactions, *Poster Presentation*, American Geophysical Union, 2012 Fall meeting, San Francisco, CA
158. Meixner, T., C.D. Soto, **H. Ajami**, D. Turner, H. Richter, F. Dominguez. 2012. Water Presence in an Arid and Semi-Arid River: Pattern, Causes, Mechanisms and Change, *Invited Oral Presentation*, American Geophysical Union, 2012 Fall meeting, San Francisco, CA
159. Meixner, T., C. Soto, **H. Ajami**, D. Turner, H. Richter, J. Stromberg, F. Dominguez. 2012. Current and Expected Changes in Hydrologic Connectivity San Pedro River, Arizona, *Oral Presentation*, American Water Resource Association (AWRA) summer specialty Conference, June 2012, Denver, CO
160. **Ajami, H.**, M.F. McCabe, S. Stisen, J.P. Evans. 2011. Exploring Impacts of Groundwater Dynamics on Catchment Scale Land Surface Fluxes, *Poster Presentation*, American Geophysical Union, 2011 Fall meeting, San Francisco, CA
161. **Ajami, H.**, M.F. McCabe, S. Stisen, J.P. Evans. 2011. On the Performance of Integrated Hydrologic Models in Simulating Catchment Scale Land Surface Fluxes, *Poster Presentation*, European Geophysical Union, 2011 General Assembly, Vienna, Austria
162. **Ajami, H.**, M.F. McCabe, J.P. Evans, S. Stisen. 2011. Toward Improved Estimation of Groundwater Recharge and Evapotranspiration Using Coupled vs. Integrated Hydrologic Models, *Poster Presentation*, International Union of Geodesy and Geophysics (IUGG) 2011, Melbourne, Australia
163. **Ajami, H.**, M.F. McCabe, J.P. Evans, T. Meixner. 2010. Seasonalizing Mountain System Recharge in Semi-Arid Catchments, *Oral Presentation*, Water Symposium, Water Research Centre, School of Civil & Environmental Engineering, University of New South Wales
164. **Ajami, H.**, P.A. Troch, T. Maddock III, T. Meixner, C. Eastoe. 2009. Quantifying Mountain Block Recharge by Means of Catchment-Scale Storage-Discharge Relationships, *Poster Presentation*, American Geophysical Union, 2009 Fall meeting, San Francisco, CA

165. **Ajami, H.**, J. Hogan, T. Maddock III, T. Meixner, P.A. Troch. 2009. Quantifying Spatial and Temporal Variability of Mountain System Recharge in Semi-Arid Catchments, *Oral Presentation*, National Ground Water Association (NGWA), Groundwater Summit 2009 meeting, Tucson, AZ
166. **Ajami, H.**, J. Hogan, T. Maddock III, T. Meixner, P.A. Troch. 2008. Quantifying Spatial and Temporal Variability of Mountain System Recharge in Semi-Arid Catchments, *Poster Presentation*, American Geophysical Union, 2008 Fall meeting, San Francisco, CA
167. **Ajami, H.**, T. Maddock III, T. Meixner. 2008. RIPGIS-NET: An ArcGIS Custom Application for the RIP-ET Package in MODFLOW, *Oral Presentation*, 2008 ESRI International User Conference, San Diego, CA
168. **Ajami, H.**, J. Hogan, T. Maddock III, T. Meixner. 2007. Application of GIS Based Tools for Groundwater Recharge and Evapotranspiration Estimation: Arc-Recharge and RIPGIS-NET, *Poster Presentation*, American Geophysical Union, 2007 Fall meeting, San Francisco, CA
169. Maddock III, T, E. Feirstein, K.J. Baird, **H. Ajami**. 2007. A Groundwater Flow Model of the Colorado River Delta to Support Riparian Habitat Restoration in Northern Mexico, *Eos Trans. AGU*, 88(23), Jt. Assem. Suppl., Abstract H53G-05.
170. **Ajami, H.**, K.J. Baird, T. Maddock III. 2007. Application of GIS Based Tools in Ecohydrologic Modeling, Mobile to Desktop Applications, *Oral presentation*, The 17th El Dia Del Agua, March 2007, Department of Hydrology and Water Resources, University of Arizona
171. **Ajami, H.**, L. Levick, K. Uhlman, D.P. Guertin. 2006. Arizona NEMO: Supporting Collaborative Water Resource Management, *Oral Presentation*, American Water Resource Association (AWRA) Conference, November 2006, Baltimore, Maryland
172. **Ajami, H.**, K.J. Baird, T. Maddock III. 2006. ARC-Recharge and RIP-GIS, Custom ArcGIS Applications for Groundwater Modeling and Ecohydrologic Research, *Poster Presentation*, American Water Resource Association (AWRA) Conference, November 2006, Baltimore, Maryland
173. Uhlman, K., D.P. Guertin, **H. Ajami**, L. Levick. 2006. Arizona NEMO: GIS Mapping and Modeling to Support Watershed Management, *Oral Presentation*, American Water Resource Association (AWRA) Spring Specialty Conference Geographic Information Systems and Water Resources IV
174. **Ajami, H.**, M. Reed. C. Wissler. 2005. Developing an ArcPad Application for Exotic Species Monitoring in Saguaro National Park, Tucson, Arizona, *Oral Presentation*, The Arizona Geographic Information Council (AGIC) 2005 GIS Conference, Prescott, AZ

175. **Ajami, H.**, K. Uhlman, D.P. Guertin. 2005. Watershed Risk Classification Using Fuzzy Logic, *Poster presentation*, National NEMO Conference, April 2005, Washington D.C.

Grants and Research Income

Awarded External Research Grants:

- 2024 National Center for Atmospheric Research/Computational & Information Systems Laboratory** (4/1/2024-3/31/2026): Combining Hydrometric and Isogeochemical Data with Integrated High-Resolution Hydrological Modeling and Particle Tracking to Quantify Major Recharge Pathways in a Mountain-Valley Aquifer System in California's Central Valley, Role: PI, Amount: 2,000,000 Core-hours (**Awarded**).
- 2024 USAID** (9/1/2024-12/30/2028): Centers of Excellence for Agriculture and Water, Role: Institutional PI, Amount: \$1.1M (**Awarded, terminated**).
- 2023 USDA NRCS** (9/28/2023-8/31/2028): Evaluating the Impacts of Climate-Vegetation-Soil Structure Interactions on Soil Hydrology within Representative Ecological Sites of the US, (D. Hirmas, **H. Ajami**), Role: Co-PI, Total Amount: \$491,478, Candidate Amount: \$215,363 (**Awarded**).
- 2023 Safe Clean Water Program LA** (1/1/2024-12/31/2025): Groundtruth: Guiding a Soils-based Strategy for Impactful Nature-based Solutions, (D. Hirmas, **H. Ajami**), Role: Co-PI, Total Amount: \$285,880 (Co-advising a postdoc with D. Hirmas) (**Current**).
- 2023 United States Department of Agriculture, Agriculture Research Service** (6/1/2023-6/1/2027): Rethinking California's Managed Aquifer Recharge Beyond Flat Terrains: A Multi-Method Assessment of Hillslope Processes, (M. Meles, **H. Ajami**), Role: Co-PI, Total Amount: \$150,000 (**Current**).
- 2023 United States Department of Agriculture, Agriculture Research Service** (5/17/2023-11/30/2025): Managed Aquifer Recharge to Sustain Irrigated Agriculture, (J. Simunek, **H. Ajami**, S. Bradford), Role: Co-PI, Total Amount: \$100,000 (**Current**).
- 2022 USGS Powell Center** (10/1/2022-10/1/2024): Using a Network of Networks for High-frequency Multi-depth Soil Moisture Observations to Infer Spatial and Temporal Drivers of Subsurface Preferential Flow, (M. Sprenger, P. Sullivan, J. Nimmo, T. Xu), Role: Working group member, Total Amount: \$153,830, Candidate Amount: \$3,000 for travel cost (**Expired**).
- 2021 National Science Foundation** (8/1/2021-7/31/2026): Collaborative Research: How Roots, Regolith, Rock and Climate Interact Over Decades to Centuries - the R3-C Frontier, (P. Sullivan, L. Li, S. Billings, A. Flores, D. Hirmas, **H. Ajami**, K. Singha, J.

Nippert), Role: Institutional PI, Total Amount: \$2,994,056, Candidate Amount: \$532,558 (Co-advising postdocs with Prof D. Hirmas) (**Current**).

2021 United States Department of Agriculture NRCS CEAP/USDA Agriculture Research Service (5/3/2021-5/31/2024): A Modeling Assessment of Agricultural Land Groundwater Recharge in the Kaweah River Watershed, California, (**H. Ajami**, D. Wang), Role: PI, Total Amount: \$112,000, Candidate Amount: \$112,000 (**Expired**).

2021 National Science Foundation/ United States Department of Agriculture NIFA (1/15/2021-1/14/2026): SitS: Collaborative Research: Soils Are Signaling Shifts in Aggregate Life-cycles: What Does This Mean for Water, Carbon, and Climate Feedbacks in the Anthropocene? (P. Sullivan, L. Li, S. Billings, A. Flores, D. Hirmas, **H. Ajami**), Role: Institutional PI, Total Amount: \$1,199,925, Candidate Amount: \$232,369 (Co-advising a MS student and a Postdoc with Prof D. Hirmas) (**Awarded**).

2020 United States Department of Agriculture, Agriculture Research Service (12/1/2020-5/31/2023): Managed Aquifer Recharge to Sustain Irrigated Agriculture, (J. Simunek, **H. Ajami**, S. Bradford), Role: Co-PI, Total Amount: \$390,698 (Co-advising Postdocs with Prof Simunek and Dr. Bradford) (**Expired**).

2020 United States Department of Agriculture (9/1/2020-8/31/2026): Artificial Intelligence to Increase Sustainability of Water, Nutrient, Salinity, and Pest Management in the Western US, (E. Scudiero, K. Schwabe, **H. Ajami**, A. Eldawy, C. Nugent, A. Putman, E. Papalexakis, M. McGiffen, M. Rivera), Role: Co-PI, Total Amount: \$9,994,384, Candidate Amount: \$464,160 (**Current**).

2020 National Institute of Health (4/1/2020-5/31/2024): Human Exposure and Vulnerability to Manganese Contaminated Groundwater Mountains of California, (S. Ying, K. Schwabe, B. Link, C. Guarino, M. Ramachandran, **H. Ajami**), Role: Co-PI, Total Amount: \$408,572, Candidate Amount: \$10,000 (**Expired**).

2020 National Science Foundation CAREER (4/1/2020-3/31/2026): Characterizing Mountain System Aquifer Recharge in the Sierra Nevada Mountains of California, Role: PI, Total Amount: \$629,841 (**Current**).

2019 United States Department of Agriculture NRCS CEAP/USDA Agriculture Research Service (10/1/2019-5/31/2024): A Modeling Assessment of Agricultural Land Groundwater Recharge in the Kaweah River Watershed, California, (**H. Ajami**, D. Wang), Role: PI, Total Amount: \$250,000, Candidate Amount: \$235,000 (**Expired**).

2019 USGS Powell Center (10/1/2019-9/30/2022): Visualizing the Invisible: Causes, Consequences, Changes, Mitigation, and Management of Streamflow Depletion Across the U.S. (A. Brookfield, M. Hill, L. Hay, S. Zipper), Role: Working group member, Total Amount: \$162,405, Candidate Amount: \$2,000 for travel cost (**Expired**).

2018 UNAVCO (01/22/2018): Static GPS Units for Research and Teaching at UC Riverside (A. Gray, **H. Ajami**, N. Barth), Role: Co-PI, Total Amount: \$20,000 (**Expired**).

2017 National Science Foundation (10/1/2017-12/31/2023): **INFEWS/T3I**: Decision Support for Water Stressed FEW Nexus Decisions, (B. McCarl, R. Mohtar, E. Pistikopoulos, R. Srinivasan, K. Schwabe, **H. Ajami**, L. Wu), Role: Co-PI, Total Amount: \$2,500,000, Candidate Amount: \$250,000 (**Expired**).

2017 California Energy Commission (5/8/2017-5/7/2020): Advanced Statistical-Dynamical Downscaling Methods and Products for California Electrical System Climate Planning, (D. Cayan, A. Martin, R. Clemsha, S. Gershunov, D. Pierce, P. Ulrich, **H. Ajami**), Role: Co-PI, Total Amount: \$1,399,888, Candidate Amount: \$210,000 (**Expired**).

2017 University of California Office of the President (UC Water) (7/1/2017-6/30/2018): Evaluating the Resilience of Irrigated Agriculture and Groundwater Systems under Climate Change: What Roles Do Crop Diversity and Groundwater Play? (K. Schwabe, **H. Ajami**), Role: Co-PI, Total Amount: \$26,762, Candidate Amount: \$13,381 (**Expired**).

2016 Australian Research Council Discovery Program (1/1/2017-12/31/2019): Uncertainty Quantification in Terrestrial Hydrologic Systems, (L. Marshall, **H. Ajami**, D. Nott), Role: Co-PI, Total Amount: \$244,988, Candidate Amount: N/A. (**Expired**).

Developed Software Applications (Underlined postdoc advisee, *Graduate student)

Ajami, H. 2005. Veg-Map. Custom ArcPad application for exotic species monitoring.

Ajami, H. 2006. Arc-Recharge. Custom ArcGIS 9.2 application for calculating and distributing mountain front recharge along the groundwater model cells. The application was developed in python and VBA.

Ajami, H., T. Maddock III. 2009. RIPGIS-NET. Custom ArcGIS 9.3 application for deriving input parameters for the MODFLOW RIP-ET package and visualize MODFLOW results. The application was developed in Visual Basic 2008, .NET framework 2.0.

Ajami, H., U. Khan*, N.k. Tuteja, A. Sharma. 2016. Semi-Distributed Hydrologic Modelling with Soil Moisture And Runoff simulation Toolkit (SMART) [User's Manual](#).

Amato, M.T., D. Hirmas, H. Ajami, K.M. Jarecke, S.A. Billings, A. Flores, L. Li, J. Nippert, A. Rudick, K. Singha, P. L. Sullivan. 2024. United States Soil Data App https://cuahsi.shinyapps.io/US_Soil_Data_App/

Honors and Awards

2020 NSF CAREER Award

2020 Editors' Citation for Excellence in Refereeing for Water Resources Research

2019 Editors' Citation for Excellence in Refereeing for Water Resources Research

2009 Len Assante Scholarship Award, National Groundwater Association,
Best Student Oral Presentation Award, Ground Water Summit Conference, Tucson, Arizona.

2008 Water Sustainability Graduate Fellowship Program, University of Arizona.

2008 The John and Margaret Harshbarger Doctoral Fellowship, University of Arizona.

2008 Student Assistantship Award Environmental System Research Institute (ESRI), 2008 ESRI International User Conference.

2007 American Geophysical Union Outstanding Student Paper Presentation award,
AGU Fall meeting, San Francisco CA.

2007 Best Speaker Award, 17th El Dia Del Agua, University of Arizona, Department of Hydrology and Water Resources.

2006 University of Arizona Graduate College Fellowship Award

2005 Landscape Studies Program Award for Outstanding Graduate Student in the School of Natural Resources, University of Arizona

Professional Service

Number of manuscripts/proposals are in parenthesis.

Journal Referee

Advances in Water Resources; Biogeochemistry; Computers and Geosciences; Ecohydrology; Ecosphere; Environmental Modelling and Software; Earth's Future; Environmental Research Letters; Frontiers in Earth Science, Hydrosphere; Geoderma; Geophysical Research Letters; Geoscientific Model Development; Ground Water; Hydrogeology Journal; Hydrological Processes; Hydrological Sciences Journal; Hydrology and Earth System Sciences; Irrigation Science; Journal of Advances in Modeling Earth Systems; Journal of Arid Environments; Journal of Climate; Journal of Hydrology; Journal of Hydrology - Regional Studies; Journal of Hydrology-X; Journal of Hydrometeorology; Journal of the American Water Resources Association; Nature Communications; Nature Sustainability; PLOS ONE; Science of the Total Environment; Science; Scientia Iranica; Water Resources Research

Grant Proposals Reviewer:

Australian Research Council

Multicampus Research Programs and Initiatives (MRPI) UCOP

National Science Foundation

NASA Terrestrial Hydrology Program

Royal Society, United Kingdom

USDA AFRI

Water Resources Research Institute of UNC

New Frontiers in Research Fund Canada

University of Wisconsin Water Resources Institute

Department of Energy

University of California Riverside – OASIS

Grant Panel Member:

National Science Foundation
NASA Terrestrial Hydrology Program
USDA AFRI
USDA Office of Scientific Quality Review
UCR Chancellor's Research Fellowship Applications
UC National Laboratory Fees Research Program In-Residence Graduate Fellowship

Editorial Boards**Associate Editor/Editor:**

Editor, Hydrological Processes: Impact Factor: 2.9, 2025-Present
Editor, Journal of Hydrology-X: Impact Factor: 3.1, 2024-Present
Guest Editor, Frontiers in Water Special issue in Advances in Integrated Surface—
Subsurface Hydrological Modeling: Impact Factor: 2.6, 11/2023-Present
Associate Editor, Journal of Hydrology, Impact Factor: 6.708, 2019-Present
Associate Editor, California Agriculture: Impact Factor: 1.44, 2017-Present
Associate Editor, Hydrological Sciences Journal, Impact Factor: 3.942, 2018–2023
External Editorial Board Member, Geological Survey of Denmark and Greenland
Bulletin (2020-Present)

Review Editor:

Frontiers in Earth Science-Hydrosphere, Impact Factor: 2.689, 10/2015-Present
Frontiers in Big Data - Data-driven Climate Sciences, 4/2018-Present

Professional Boards and Societies Service:

1. **UCR Representative**, University Corporation for Atmospheric Research (UCAR), May 2024-Present
2. **Board of Directors Member**, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2023-Present
3. **Executive Committee Member of the Board**, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2024-Present
4. **Board Liaison for CUAHSI Education and Outreach Standing Committee**, 2023-2025
5. **DEI Standing Committee Member**, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2021-2023
6. **Groundwater Resource Association of California**, Contemporary Groundwater Issues Council, 2022-Present

7. **Outstanding Student Presenter Award Judge**, American Geophysical Union, Fall 2017, 2019, 2022, 2023 meetings
8. **Search Committee Member**, USDA Sustainable Agricultural Water Systems Research: Davis, CA, 2021
9. **2018-2019 Chair, W3188**: Soil, Water, and Environmental Physics Across Scales USDA Multi-state project
10. **2017 – 2018 Secretary, W3188**: Soil, Water, and Environmental Physics Across Scales USDA Multi-state project

Conference Organizing:

1. **Co-convened and Co-Chaired a Session at the American Geophysical Union, 2024 Fall Meeting** Advancing Understanding of Mountainous Critical Zones Through Observations and Numerical Experiments, R. Dwivedi, **H. Ajami**, H.R. Barnard
2. **Co-convened and Co-Chaired a Session at the Geological Society of America, 2024 Fall Meeting**, Groundwater Recharge and Unsaturated-zone Processes at Local and Regional Scales: A Reflection on Rick Healy's Legacy, **H. Ajami**, D. Rosenberry, K.S. Perkins, B. Scanlon, R. Webb, J. McIntosh, G. Ferguson
3. **Co-convened and Co-Chaired a Session at the American Geophysical Union, 2023 Fall Meeting**, Advancing Understanding of Mountainous Critical Zones Through Observations and Experiments, R. Dwivedi, **H. Ajami**, H.R. Barnard
4. **Co-convened and Co-Chaired a Session at the American Geophysical Union, 2022 Fall Meeting**, Advancing Understanding of Mountainous Critical Zones Through Observations and Experiments, R. Dwivedi, **H. Ajami**, H.R. Barnard, T. Meixner
5. **Salton Sea Summit 2022**, Planning committee: K. Schwabe (Co-Chair), K. Kim, **H. Ajami**, D. Lo, M. McKibben, J. Warren, A. Patel, T. Hedges, C. Barrows, A. O'Neil, M. Cohen (Co-Chair)
6. **Co-Chaired a Session at the American Geophysical Union, 2021 Fall Meeting**, Stable Isotopes in the Critical Zone: Methods, Applications, and Process Interpretations, M. Sprenger, N. Orlowski, S.T. Allen, E.J. Olson, **H. Ajami**.
7. **Co-convened and Co-Chaired a Session at the American Geophysical Union, 2020 Fall Meeting**, Modeling the Hydrologic Impacts of Climate Change and Environmental Feedbacks at the Catchment Scale, C. Stephens, L. Lin, **H. Ajami**, L.E. Band

8. **Co-convended a Session at the American Geophysical Union, 2019 Fall Meeting,** The Use of Geophysical Methods for Groundwater Evaluation and Management I, J.W Lane, R.J. Knight, J.J. Butler, C.C. Faunt, **H. Ajami**
9. **Organized 2019 W3188: Soil, Water, and Environmental Physics Across Scales Multi-State Annual Meeting,** January 2019, University of California Riverside
10. **Co-convended a Session at the 2019 Soil Science Society of America International Soils Meeting,** January 2019, On the Scaling Behavior of Subsurface Flow and Soil Hydraulic Properties in Hydrologic and Earth System Models Oral, **H. Ajami**, N. Chaney
11. **Workshop Organizing Committee Member, R'Water Collaborative Workshop, 2018 Fall meeting,** University of California Riverside
12. **Moderator, UC Water Annual meeting, 2018 Fall Meeting,** Reimagining California Water Fourth Annual Meeting, Sacramento, CA
13. **Co-convended and Co-chaired a Session at the American Geophysical Union, 2016 Fall Meeting,** Advances in Understanding and Remote Sensing of Land-Atmosphere Interactions: From Bedrock to Boundary Layer, J. Santanello, R. Rosolem, **H. Ajami**, H. Salmun.
14. **Co-convended a Session at the European Geosciences Union, 2016,** Spatial Patterns Evaluation and Process-physics Understanding in Distributed Hydrologic Modelling, S. Stisen, M. Sulis, L. Samaniego, M. Camporese, S. Fatichi, **H. Ajami**
15. **Co-convended and Co-chaired a Session at the American Geophysical Union, 2014 Fall meeting,** Advances in Process-based, Very High Resolution Hydrological Modeling Across Scales, D. Gochis, M. Bierkens, M. Wigmosta, **H. Ajami**.
16. **2010-2012, Organizer of Hydrology Monthly Meeting Seminars,** School of Civil & Environmental Engineering, University of New South Wales Australia.

Workshops/Meetings Attended:

1. **2025-12th Biennial Rosenberg Forum** (Panel member), 10/2025, Managing River Deltas: Global and Local Perspectives, Vietnam, Invited
2. **Powell Center Working Group member meeting on Preferential flow,** 6/2024, Fort Collins, Colorado
3. **2023-Eleventh Biennial Rosenberg Forum** (Panel member), 10/2023, Water Quantity and Quality Management, Economic Production and Welfare Implications in the Global South, Candidate was invited to participate in the panel discussions, South Africa, *Invited*

4. **Taking the Pulse of the Planet:** Sensors to Solutions for Groundwater Science and Management in California's San Joaquin Valley workshop, 6/2023, Stanford University, *Invited*
5. **Powell Center Working Group member meeting on Preferential flow**, 5/2023, Fort Collins, Colorado
6. **Powell Center Working Group member meeting on Causes and Consequences of Stream Depletion**, 9/2022, Virtual
7. **Department of Energy workshop** (Panel member and presenter), 11/2021, Understanding and Predictability of Integrated Mountain Hydroclimate, *Invited*
8. **Powell Center Working Group member meeting on Causes and Consequences of Stream Depletion**, 10/2020, Virtual
9. **2018-Tenth Biennial Rosenberg Forum** (Panel member), 10/2018, Sustainable Groundwater Management: The Path Forward, Candidate was invited to participate in the panel discussions, San Jose California, *Invited*

University and Public Service

Thesis/Dissertation Committee:

1. Haley Johnson, MS, Environmental Sciences, UC Riverside
2. Clare Murphy-Hagan, PhD, Environmental Sciences, UC Riverside
3. Simmi Tomar, PhD, Environmental Sciences, UC Riverside (Co-Chair)
4. Samiksha Singh, PhD, Environmental Sciences, UC Riverside
5. Stefano Casirati, PhD, Environmental Systems, UC Merced
6. Alyssa Duro, MS, Environmental Sciences, UC Riverside (Chair)
7. Tiantian Zhou, PhD, Environmental Sciences, UC Riverside
8. Amninder Singh, PhD, Environmental Sciences, UC Riverside
9. Monica Hope, MS, Environmental Sciences, UC Riverside
10. Win Cowger, PhD, Environmental Sciences, UC Riverside
11. James Guilinger, PhD, Environmental Sciences, UC Riverside
12. Aarushi Jhatro, MS, Environmental Sciences, UC Riverside (Chair)
13. Nathan Jumps, MS, Environmental Sciences, UC Riverside
14. Setrag Cherchian, MS, Environmental Sciences, UC Riverside
15. Jing Liang, PhD, Environmental Sciences, UC Riverside
16. Quynh Tran, PhD, Chemical and Environmental Engineering, UC Riverside
17. Bushra Naseem, PhD, Civil and Environmental Engineering, University of New South Wales Australia
18. Urooj Khan, PhD, Civil and Environmental Engineering, University of New South Wales Australia

PhD Qualifying Exam Committee Member:

1. Kuntal Chaudhuri, Earth and Planetary Sciences, Oral Exam, UC Riverside
2. Keshav Arogyaswamy, Microbiology & Plant Pathology, Oral Exam, UC Riverside

3. Ryan Conway, Evolution, Ecology, and Organismal Biology, Oral Exam, UC Riverside
4. Mayur Patil, Computer Science and Engineering, Oral Exam, UC Riverside
5. James Guilinger, Environmental Sciences, Written & Oral Exams, UC Riverside
6. Amninder Singh, Environmental Sciences, Written & Oral Exams, UC Riverside
7. Win Cowger, Environmental Sciences, Written & Oral Exams, UC Riverside
8. Anish Sapkota, Environmental Sciences, Written & Oral Exams, UC Riverside
9. Tiantian Zhou, Environmental Sciences, Oral Exam, UC Riverside
10. Samiksha Singh, Environmental Sciences, Written Exam, UC Riverside
11. Samiksha Singh, Environmental Sciences, Oral Exam, UC Riverside
12. Yuhua Situ, Environmental Sciences, Written Exam, UC Riverside, Chair
13. Talha Rafiq, Environmental Sciences, Oral Exam, UC Riverside
14. Stefano Casirati, Environmental Systems, Oral Exam, UC Merced
15. Zahra Amiri, Environmental Sciences, Written Exam, UC Riverside
16. Kristin Hamilton, Environmental Sciences, Written Exam (2), UC Riverside, Chair
17. Alyssa Duro, Environmental Sciences, Written Exam, UC Riverside, Chair
18. Alyssa Valdez, Environmental Sciences, Written Exam, UC Riverside, Chair
19. Michael Lum, Environmental Sciences, Written Exam, UC Riverside, Chair
20. Clare Murphy-Hagan, Environmental Sciences, Written Exam, UC Riverside
21. Ben Newcomb, Environmental Sciences, Written Exam, UC Riverside
22. Karlee Rivera, Earth and Planetary Sciences, Oral Exam, UC Riverside
23. Clare Murphy-Hagan, Environmental Sciences, Oral Exam, UC Riverside
24. Eric Wineteer, Environmental Sciences, Written Exam, UC Riverside, Chair
25. Miranda Vega, Environmental Sciences, Written Exam, UC Riverside, Chair
26. Berhanu Sinshaw, Environmental Systems, Oral Exam, UC Merced
27. Diana Rodriguez, Environmental Sciences, Oral Exam, UC Riverside
28. Eric Wineteer, Environmental Sciences, Oral Exam, UC Riverside, Chair
29. Brad Ries, Environmental Sciences, Written Exam, UC Riverside, Chair
30. Vaishnavi Varikuti, Plant and Soil Science, Oral Exam, Texas Tech University

PhD Advisory Committee:

1. James Guilinger, Environmental Sciences, UC Riverside
2. Amninder Singh, Environmental Sciences, UC Riverside
3. Kristine Hamilton, Environmental Sciences, UC Riverside
4. Anish Sapkota, Environmental Sciences, UC Riverside

PhD Panel Reviewer:

1. Valentin Heimhuber, School of Biological, Earth & Environmental Sciences, UNSW
2. Seokhyeon Kim, School of Civil & Environmental Engineering, UNSW
3. Jannatun Nahar, School of Civil & Environmental Engineering, UNSW
4. Guangwu Chen, School of Civil & Environmental Engineering, UNSW
5. Diti Moalafhi, School of Civil & Environmental Engineering, UNSW
6. Dipayan Choudhury, School of Civil & Environmental Engineering, UNSW
7. Mohammad Amin Asadi Zarch, School of Civil & Environmental Engineering, UNSW
8. Zaved Khan, School of Civil & Environmental Engineering, UNSW

External Examiner:

Hanieh Kosari, Faculty of Engineering and Built Environment, University of Newcastle, Australia, Master of Philosophy

Outreach

1. Organized and led a 2-day/3-day workshop on **Hydrology and GIS** sponsored by the NSF CAREER grant. The workshop was held in July 2021 (2 days), 2022 (3 days), 2024 (2 days), and 2025 (2 days) and trained 23 high school teachers and 6 undergraduate students who are planning for a teaching career. As part of the workshop, I developed 12 learning modules and activities for High school teachers.
2. Co-Organized and led a 2-day workshop at the 2024 Earth Educators' Rendezvous (EER) in Philadelphia, PA entitled, "**Understanding Signals in the Soil: Data-centered learning in critical zone science.**" This workshop targeted Earth science undergraduate-student educators (graduate students, postdoctoral fellows, lecturers, and faculty) seeking to employ data-centered learning techniques in their courses. The workshop was supported by NSF Sits and FRES Grants.
3. **Governing Council, UC President Advisory Council tour Desert REC, Salton Sea** meeting, April 2024, Presenter ([link](#))
4. **UC Capital Hill Briefing**, Panel Member, April 2024, Water Research, The Future of Agriculture and Water Management in the Face of Water Scarcity in the West, Washington DC
5. **Training Community Scientists** for groundwater sampling and disseminating NSF CAREER research results via online meetings, Feb 2022 - Present
6. California Agriculture Summit (Panel member), 5/2019, Larta Institute and UC Riverside, Candidate gave a short talk and served as a water panel member.
7. The Cadiz Water Project (Invited Panel member), 4/2019, Pitzer College, Candidate provided an overview of sustainable groundwater management and served as a panel member.
8. California State University, San Bernardino (Invited Speaker), 10/2018, Candidate gave a public seminar entitled: Climate Change Impacts on Water Resources in California: Opportunities and Path Forward
9. Riverside County Ag Expo (Invited Speaker), 3/2018, *Riverside County Economic Development Agency*, Candidate gave a talk entitled: Towards Improved Water Resources Management by Merging Data with Models

10. Western Growers Association (Panel member), 2/2018, Innovation in the Imperial Valley, Candidate discussed water related issues in the region
11. San Bernardino Valley Municipal Water District (Technical Adviser), 1/2018 - 2/2018, Provided expert advice on groundwater modeling and riparian evapotranspiration estimation using MODFLOW for the groundwater modeling efforts of the district
12. March for Science/Graduate Sustainability Network's Earth Day Celebration of Science (Invited Speaker), 4/2017, Candidate gave a talk entitled: Water Resources Management in the 21st century, University of California Riverside
13. Antelope Valley Scoping Meeting, 1/2017, Fugitive Dust Control in the Antelope Valley: Everything Depends on Water and Vegetation, Group presentation

Press Release:

1. **UC Riverside Press Release**, 7/2024, Parched Central Valley Farms Depend on Sierras for Groundwater ([UCR Press Release](#))
2. **AGU EOS**, 11/2023, River Recovery from Drought Can Take Years ([AGU Eos](#))
3. **Nature World News**, 10/2023, River recoveries can take years due to prolonged drought, lack of rain, study shows ([Nature World News](#))
4. **UC Riverside Press Release**, 10/2023, Rivers May Not Recover from Drought for Years ([UCR Press Release](#))
5. **The Hill**, 10/2022, California's Salton Sea is Shrinking Because of Colorado River Water Shortage, Research Finds ([The Hill](#))
6. **The Poetry of Science**, 10/2022, Washed into Dust by Sam Illingworth ([The poetry of Science](#))
7. **UC Riverside Press Release**, 10/2022, Why the Salton Sea is Turning into Toxic Dust, ([UCR press release](#))
8. **UC Riverside Press Release**, 11/2021, UCR Experts Weigh Drought's Long-term Impacts, Researchers Consider implications for the Central Valley, and for Health ([Link](#))
9. **Civil Engineering Magazine**, 11/2021, Study: Droughts May Affect Groundwater More Than Expected ([Civil Engineering Magazine, ASCE](#))
10. **UC Riverside Press Release**, 9/2021, Critical Groundwater Supplies May Never Recover from Drought ([UCR press release](#))

Interviews and Podcasts

1. **Public Policy Institute of California**, 4/2024, Interview with Sarah Bardeen, What Are Baseflow Droughts—and Why Should We Care? ([PPIC](#))
2. **Eyewitness News at 5pm**, 2/2024, Interview with Leticia Juarez, abc7, Snow and Water Resources ([abc 7](#))
3. **WBUR - NPR Boston**, 8/2023, Interview with Dean Russell, Would Flooding Death Valley Offset Sea Level Rise? ([NPR](#))

4. **Eyewitness News at 5pm**, 3/2023, Interview with Leticia Juarez, abc7, California Water Crisis ([abc 7](#))
5. **Channel News Asia**, 3/2022, An international news channel based in Singapore, discussed drought impacts on water resources
6. **Spectrum News**, 1/2022, Water Replenishment District Launches Plan to Clean Brackish Water in Aquifers for Drinking ([Spectrum News](#))
7. **Jefferson Exchange** Radio Interview, 11/2021, Researchers Discover Drought Will Not Allow Groundwater Recharge ([Radio Interview with the Jefferson Exchange](#))

Professional Memberships

American Geophysical Union (AGU), 2007-Present
European Geosciences Union (EGU), 2013-Present
National Groundwater Association (NGWA), 2008-Present
Geological Society of America (GSA), 2019-2020, 2024
Soil and Water Conservation Society (SWCS), 2024-Present
Soil Science Society of America (SSSA), 2018-2019
Groundwater Resources Association of California, 2017-2018
International Association of Hydrogeologists, 2010-2015