

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

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

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, 2023, ENSC 001: Introduction to Environmental Science: Natural Resources

Department of Environmental Sciences, University of California Riverside, 2020, 2022, ENSC 210: Integrated Hydrologic Modeling (co-taught with J. Simunek)

Department of Environmental Sciences, University of California Riverside, 2018, 2019, 2020, 2021, 2022, 2023, ENSC 175: Spatial Analysis and Remote Sensing for Environmental Sciences

Department of Environmental Sciences, University of California Riverside, 2018, 2019, 2021, 2023, 2024, ENSC 165: Principles of Groundwater Science

Department of Environmental Sciences, University of California Riverside, 2017, GEO 132: Groundwater Geology

Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 1, 2016, CVEN 9625: Fundamentals of Water Engineering

Lecturer, School of Civil and Environmental Engineering, University of New South Wales, Semester 2, 2015, CVEN 9612: Catchment and Water Resources 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.

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 (6/2017-9/2017): (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)
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 – Present): (UCR, Environmental Sciences)
13. Lily Caplon-Guin (6/2023 – Present): (UCR, Bioengineering)
14. Jose Angel Pulido (6/2023 – Present): (UCR, Electrical Engineering)

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 (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)

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- Present): (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- Present): (Postdoctoral fellow, UCR, Co-advised with Prof. J. Simunek and Dr. S. Bradford)
10. Matthew Amato (10/2023-Present): (Postdoctoral fellow, UCR, Co-advised with Prof. D. Hirmas)

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 student/postdoc advisee, *Visiting scholar)

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*, 00, 00–00. <https://doi.org/10.1002/saj2.20612>
49. Chen, L., J. Šimůnek, S.A. Bradford, **H. Ajami**, M.B. Meles. 2023. Coupling Water, Solute, and Sediment Transport into a New Computationally Efficient Hydrologic Model. *Journal of Hydrology*. <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*. <https://www.sciencedirect.com/science/article/pii/S0022169423011988>
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. Klamm, M. Unruh, P.L. Sullivan. 2023. Is Macroporosity Controlled by Complexed Clay and Soil Organic Carbon? *Geoderma* 437, 116565. DOI: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. DOI: 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, 129515. DOI: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*.
<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*,
<https://calag.ucanr.edu/archive/?article=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**. 2021. Combined Impacts of Uncertainty in Precipitation and Air Temperature on Simulated Mountain System Recharge from an Integrated Hydrologic Model, *Hydrology & Earth System Sciences Discussions*,
<https://hess.copernicus.org/preprints/hess-2020-558/>
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, 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. 2021. 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**. 2021. 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](https://doi.org/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>
30. Kim, S., **H. Ajami**, and A. Sharma. 2020. Using Remotely Sensed Information to Improve Vegetation Parameterization in a Semi-distributed Hydrological Model (SMART) for Upland Catchments in Australia, *Remote Sensing*, <http://dx.doi.org/10.3390/rs12183051>
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>
25. Fan, Y., M. Clark, D.M. Lawrence, S. Swenson, L.E. Band, S.L. Brantley, P.D. Brooks, W.E. Dietrich, A. Flores, G. Grant, J.W. Kirchner, D.S. Mackay, J.J. McDonnell, P. C.D. Milly, P.L. Sullivan, C. Tague, **H. Ajami**, N. Chaney, A. Hartmann, P. Hazenberg, J. McNamara, J. Pelletier, J. Perket, E. Rouholahnejad-

- Freund, T. Wagener, X. Zeng, E. Beighley, J. Buzan, M. Huang, B. Livneh, B.P. Mohanty, B. Nijssen, M. Safeeq, C. Shen, W. van Verseveld, J. Volk, D. Yamazaki. 2019. Hillslope Hydrology in Global Change Research and Earth System Modeling, *Water Resources Research*, <https://doi.org/10.1029/2018WR023903>
24. Tang, Y., L. Marshall, A. Sharma, **H. Ajami**. 2019. Modelling Precipitation Uncertainties in a Multi-objective Bayesian Ecohydrological Setting, *Advances in Water Resources*, <https://doi.org/10.1016/j.advwatres.2018.10.015>
23. **Ajami, H.**, A. Sharma. 2018. Disaggregating Soil Moisture to Finer Spatial Resolutions - A Comparison of Alternatives, *Water Resources Research*, <https://doi.org/10.1029/2018WR022575>
22. Sandoval, E., G. Baldo, N., Núñez, J., Oyarzún, J.P. Fairley, **H. Ajami**, J.L. Arumí, E. Aguirre, H. Maturana, R. Oyarzún. 2018. Groundwater Recharge Assessment in a Rural, Arid, Mid-mountain Basin in North-Central Chile, *Hydrological Sciences Journal*, 63(13-14),1873-1889, <https://doi.org/10.1080/02626667.2018.1545095>
21. **Khan, U.**, **H. Ajami**, N.K. Tuteja, A. Sharma, S. Kim. 2018. Catchment Scale Simulations of Soil Moisture Dynamics Using an Equivalent Cross-Section based Hydrological Modelling Approach, *Journal of Hydrology*, 564: 944-966, <https://doi.org/10.1016/j.jhydrol.2018.07.066>
20. Tang, Y., L. Marshall, A. Sharma, **H. Ajami**. 2017. A Bayesian Alternative for Multi-objective Ecohydrological Model Specification, *Journal of Hydrology*, <https://doi.org/10.1016/j.jhydrol.2017.07.040>
19. Niraula, R., T. Meixner, F. Dominguez, N. Bhattarai, M. Rodell, **H. Ajami**, D. Gochis, C. Castro. 2017. How Might Recharge Change Under Projected Climate Change in the Western US? *Geophysical Research Letters*, doi:10.1002/2017GL075421
18. Niraula, R., T. Meixner, **H. Ajami**, M. Rodell, D. Gochis, C.L. Castro. 2017. Comparing Potential Recharge Estimates from Three Land Surface Models across the Western US, *Journal of Hydrology*, <http://dx.doi.org/10.1016/j.jhydrol.2016.12.028>
17. Gemitzi, A., **H. Ajami**, H. Richnow. 2017. Developing Empirical Monthly Groundwater Recharge Equations based on Modeling and Remote Sensing Data - Modeling Future Groundwater Recharge to Predict Potential Climate Change Impacts, *Journal of Hydrology*, <http://dx.doi.org/10.1016/j.jhydrol.2017.01.005>
16. **Ajami, H.**, A. Sharma, L.E. Band, J.P. Evans, N.K. Tuteja, G.E. Amirthanathan, M.A. Bari. 2017. On the Non-stationarity of Hydrological Response in Anthropogenically Unaffected Catchments: An Australian Perspective, *Hydrology and Earth System Sciences*, doi:10.5194/hess-21-281-2017

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>
14. Meixner, T., A. Manning, D. Stonestrom, D.M. Allen, **H. Ajami**, K. Blasch, A. Brookfield, C.L. Castro, J.F. Clark, D. Gochis, A. Flint, K. Neff, R. Niraula, M. Rodell, B. Scanlon, K. Singha, M. Walvoord. 2016. Implications of Prospective Climate Change for Groundwater Recharge in the Western United States, *Journal of Hydrology*, [doi:10.1016/j.jhydrol.2015.12.027](https://doi.org/10.1016/j.jhydrol.2015.12.027)
13. **Naseem, B.**, **H. Ajami**, Y. Liu, I. Cordery, A. Sharma. 2016. Multi-objective Assessment of Three Remote Sensing Vegetation Products for Streamflow Prediction in a Conceptual Ecohydrological Model, *Journal of Hydrology*, doi:10.1016/j.jhydrol.2016.10.038
12. **Ajami, H.**, M.F. McCabe, J.P. Evans. 2015. Impacts of Model Initialization on an Integrated Surface Water–Groundwater Model, *Hydrological Processes*, 29(17):3790-3801, doi: 10.1002/hyp.10478
11. **Naseem, B.**, **H. Ajami**, I. Cordery, A. Sharma. 2015. A Multi-objective Assessment of Alternate Conceptual Ecohydrological Models, *Journal of Hydrology*, 529(3):1221-1234, doi:10.1016/j.jhydrol.2015.08.060
10. Graham, P., M. Andersen, M.F. McCabe, **H. Ajami**, A. Baker, I. Acworth. 2015. To What Extent Do Long-Duration High-Volume Dam Releases Influence River-Aquifer Interactions? A Case Study in New South Wales, Australia, *Hydrogeology Journal*, 23: 319-334, doi: 10.1007/s10040-014-1212-3
9. **Ajami, H.**, J.P. Evans, M.F. McCabe, S. Stisen. 2014. Technical Note: Reducing the Spin-up Time of Integrated Surface Water–Groundwater Models, *Hydrology and Earth System Sciences*, 18, 5169-5179, doi: 10.5194/hess-18-5169-2014
8. **Ajami, H.**, M.F. McCabe, J.P. Evans, S. Stisen. 2014. Assessing the Impact of Model Spin-up on Surface Water-Groundwater Interactions Using an Integrated Hydrologic Model, *Water Resources Research*, 50, doi:10.1002/2013WR014258
7. **Khan, U.**, N. Tuteja, **H. Ajami**, A. Sharma. 2014. An Equivalent Cross-Sectional Basis for Semi-Distributed Hydrological Modeling, *Water Resources Research*, 50, doi:10.1002/2013WR014741
6. **Ajami, H.**, T. Maddock III, T. Meixner, J.F. Hogan, D.P. Guertin. 2012. RIPGIS-NET: A GIS Tool for Riparian Groundwater Evapotranspiration in MODFLOW, *Ground Water*, 50(1): 154-158, doi:10.1111/j.1745-6584.2011.00809.x

5. Abramowitz, G., L. Pouyanne*, **H. Ajami**. 2012. On the Information Content of Surface Meteorology for Downward Atmospheric Long-wave Radiation Synthesis, *Geophysical Research Letters*, 39, doi:10.1029/2011GL050726
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.** 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.saltonseataskforce.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. SchreinerMcGraw. 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>
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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

1. **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
2. **Ajami, H.** 2023. Understanding Climate-Groundwater Feedbacks in Mountain-Valley Aquifers, *Oral Presentation*, State of the Basin, Tulare Basin Watershed Network Meeting
3. **Ajami, H.** 2023. Understanding Climate-Groundwater Feedbacks in Coupled Natural-Human Systems, *Oral Presentation*, Stanford University

4. **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
5. **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
6. **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, *Science-Policy Dialogue at the Food-Energy-Water Nexus Workshop*, Texas A&M University, November 2022
7. **Ajami, H.** 2022. Climate Change Impacts on California's Water - The Science of Drought in the Anthropocene, *California Water Law and Policy conference*, Online
8. **Ajami, H.** 2022. Understanding Groundwater Response to Meteorological Droughts using Data Driven and Integrated Hydrologic Modeling Approaches, *Cal Poly Pomona, College of Science Lecture Series*
9. **Ajami, H.** J.S. Acero Triana. 2022. Improving Water Resource Management in the Salton Sea Basin using an Integrated Modeling Framework, *Salton Sea Summit*, UCR Palm Desert Campus
10. **Ajami, H.** 2022. Effects of Droughts on Groundwater Recharge, *American Ground Water Trust / Association of Groundwater Agencies Conference*, Lakewood, CA
11. **Ajami, H.** 2021. Understanding Groundwater Response to Meteorological Droughts Using Data Driven and Integrated Modeling Approaches, *University of Iowa*
12. **Ajami, H.** 2021. Climate Change Impact Assessment on Water Resources, *California State University San Bernardino*
13. **Ajami, H.** 2021. Understanding Ecohydrologic Processes of Agricultural Ecosystems from Headwaters to Groundwater During Droughts, *UC ANR Water Seminar Series*
14. **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.
15. 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*

16. **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.
17. **Ajami, H.** 2019. Driving Efficiency and Resiliency in Agricultural Water Stewardship. World Water-Tech North America, Los Angeles, CA. (Speaker and Panel member)
18. **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.
19. **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.
20. **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.
21. **Ajami, H.** 2019. Towards Improved Hydrologic Prediction by Merging Data with Models. *USDA Salinity Lab Seminar Series*, Riverside, CA.
22. **Ajami, H.** 2018. Groundwater & the Importance of Interdisciplinarity. *Oral Presentation*, UC Water American Geophysical Union Meeting Reception, Washington D.C.
23. **Ajami, H.**, D. Chisholm. 2018. Virtualizing ArcGIS Pro in AWS: Workspaces/GPU Bundles. GeoNet Webinar, Environmental System Research Institute.
24. **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.
25. **Ajami, H.** 2018. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments. Geophysical research group seminar series, *Stanford University*.
26. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction by Merging Data with Models. Data Science Center Seminar series, *University of California Riverside*
27. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction using Integrated Land Surface-Groundwater Models. Earth Sciences Seminar, *University of Southern California*
28. **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*.

29. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction using Integrated Land Surface-Groundwater Models. ES/ESS Seminar/UC Water, *University of California Merced*.
30. **Ajami, H.** 2017. Toward Improved Hydrologic Prediction Using Integrated Land Surface Groundwater Models. CEE Seminar, *University of California Irvine*.
31. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models. Geological Sciences Department Seminar, *Cal Poly Pomona, CA*.
32. **Ajami, H.** 2017. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models. W3188: Soil, Water, and Environmental Physics Across Scales, *Multistate Annual Meeting*, Las Vegas, Nevada.
33. **Ajami, H.** 2016. A Hydrologist Perspective on Mathematical Modeling of Terrestrial Hydrologic Processes. Interdisciplinary Seminar on Mathematical and Computational Modeling, *University of California Riverside*.
34. **Ajami, H.** 2016. Towards Improved Hydrologic Prediction Using Integrated Land Surface-Groundwater Models. Hydrology and Atmospheric Sciences Weekly Colloquium, *University of Arizona*.
35. **Ajami H.** 2016. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models. Department of Earth and Atmospheric Sciences Seminar, *University of Nebraska-Lincoln*.
36. **Ajami H.** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models. Department of Hydrology and Hydraulic Engineering Webinar, *Vrije Universiteit Brussel, Belgium*.
37. **Ajami H.,** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models. Hydrology and Quantitative Water Management Webinar, *Wageningen University, Netherlands*.
38. **Ajami H.,** 2015. Towards Improved Estimation of Recharge and Evapotranspiration Processes in Groundwater Models. Department of Civil Engineering, *University of Bristol, United Kingdom*.
39. **Ajami, H.** 2014. Quantifying Spatial and Temporal Variability of Recharge Processes in Semi-Arid Basins. Centre for Water in the Mineral Industry, *University of Queensland, Brisbane, Australia*.
40. **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. *American Geophysical Union*, 2012 Fall meeting, San Francisco, CA.

41. **Ajami, H.**, M.F. McCabe, J.P. Evans. 2012. Exploring the Role of Groundwater Dynamics on Catchment Scale Land Surface Fluxes. School of Civil and Environmental Engineering, *University of New South Wales*.
42. **Ajami, H.**, P.A. Troch, T. Maddock III, T. Meixner, J. Hogan. 2010. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments. *International Association of Hydrogeologists*, NSW chapter, Sydney, Australia.
43. **Ajami, H.** 2010. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments. School of Civil and Environmental Engineering, *University of New South Wales*.

Conference Presentations (underlined student and postdoc advisee)

1. **Ajami, H.**, J.S. Acero Triana, E. Wineteer, S. Armengol, S. Lee, J. Palmer. 2024. Understanding Surface Water-Groundwater Interactions From Local to Continental Scales, *Oral Presentation*, W4188 Multistate meeting, Las Vegas
2. 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
3. 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. Klamm, 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
4. 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
5. 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
6. 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
7. 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
8. 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
 9. 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
 10. 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
 11. 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.
 12. 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.
 13. 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.
 14. Wyatt, B.M., B. Li, **H. Ajami**, R. Araki, O. Crompton, D. Gimenez, J. Groh, D.R. Hirmas, J.R. Nimmo, N. Singh, M. Spenger, P.L. Sullivan, I. Wiekenkamp, 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.
 15. 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

16. **Ajami, H.** 2023. Quantifying Groundwater Recharge Dynamics in Response to Climate Variability, *Oral Presentation*, W4188 Annual Meeting, Las Vegas
17. **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
18. **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
19. **Vall, S.A., 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
20. **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
21. **Acero Triana, J.S., H. Ajami, S.A. 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
22. **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
23. **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
24. **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>

25. 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
26. 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
27. 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.
28. **Ajami, H.** 2022. Understanding Groundwater Response to Meteorological Droughts Using Data Driven and Integrated Modeling Approaches, W4188 Annual Meeting Virtual January 2022
29. **Ajami, H.** 2021. Ecohydrologic Processes of Irrigated Agriculture Influence Lake-Groundwater Interactions in a Highly Managed Watershed. W4188 Annual Meeting Virtual, May 2021
30. 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
31. 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
32. 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
33. Vall, S.A., **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
34. 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

35. 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
36. 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
37. 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
38. 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
39. 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
40. 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
41. 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, ASA, CSSA, SSSA International Annual Meeting.
42. 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.
43. 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? Goldschmidt2021• Virtual• 4-9 July.

44. Acero Triana, J.S., **H. Ajami**. 2021. Understanding the Hydrologic Response Mechanisms of California's Largest Lake in a Highly Managed Endorheic Basin, *Online Presentation*, European Geosciences Union General Assembly 2021.
45. 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.
46. **Ajami, H.**, A. Schreiner-McGraw. 2021. Quantifying Mountain Aquifer Recharge Rates Using Storage-Discharge Functions in the Sierra Nevada, California, *Online Presentation*, European Geosciences Union General Assembly 2021.
47. 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.
48. Schreiner-McGraw, A., **H. Ajami**. 2020. Propagation of Meteorological Variability from Atmosphere to Groundwater. *Online Poster Presentation*, American Geophysical Union, 2020 Fall meeting.
49. 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.
50. **Ajami, H.**, A. Schreiner-McGraw. 2020. Characterizing Groundwater Response Time to Droughts Across the United States. *Online Presentation*, European Geosciences Union General Assembly 2020.
51. 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.
52. 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.
53. 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.
54. **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.

55. 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.
56. 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.
57. 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.
58. 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.
59. 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.
60. 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.
61. Jha, A., **H. Ajami**. 2019. Exploring Clustering to Discern Representative Hillslope Properties in a Coarse Grid. *Poster Presentation*, W3188 Multistate Annual Meeting, Riverside, CA.
62. 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.
63. **Ajami, H.** 2019. Development of a Semi-Distributed Hydrologic Modeling Framework for Catchment Scale Simulations. *Oral Presentation*, W3188 Multistate Annual Meeting, Riverside, CA.
64. **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.
65. **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.

66. 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.
67. 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.
68. **Ajami, H.** 2018. Quantifying Mountain System Recharge Processes in Semi-Arid Catchments. *Oral Presentation*, GRA's Western Groundwater Congress, Sacramento, CA.
69. **Ajami, H.** 2018. Assessing the Impacts of Climate Change on Groundwater Recharge - A Recent Synthesis. *Poster Presentation*, UC Water Annual Meeting, Sacramento, CA.
70. **Ajami, H.** 2018. Development of a Semi-Distributed Hydrologic Modeling Framework for Catchment Scale Simulations. *Oral Presentation*, W3188 Multistate Annual Meeting, Las Vegas, Nevada
71. **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
72. 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.
73. 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.
74. 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.
75. 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

76. **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.
77. 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.
78. **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.
79. **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.
80. 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.
81. **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.
82. 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.
83. 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.
84. 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.
85. 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.
86. 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.

87. **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
88. **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.
89. 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.
90. 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.
91. **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.
92. 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.
93. 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.
94. 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.
95. 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.
96. 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.
97. 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.
98. **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.
99. 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.
100. 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.
101. 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.
102. 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.
103. **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.
104. **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.
105. 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.
106. 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.

107. 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.
108. **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.
109. **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.
110. 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.
111. 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.
112. 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.
113. 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, Colorado.
114. **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.
115. **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.
116. **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.
117. **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.

118. **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.
119. **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.
120. **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.
121. **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.
122. **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.
123. 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.
124. **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.
125. **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.
126. **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.
127. 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.

128. **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.
129. **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 (Candidate: \$3.5M, Total: \$20.3M)

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 (**Awarded**).

2023 United States Department of Agriculture, Agriculture Research Service (6/1/2023-6/1/2025): 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**).

2021 National Science Foundation (8/1/2021-7/31/2025): 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: Co-PI, Total Amount: \$2,994,056, Candidate Amount: \$532,558 (**Current**).

2021 National Science Foundation (1/15/2021-1/14/2025): 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: Co-PI, Total Amount: \$1,199,925, Candidate Amount: \$232,369 (Co-advising a PhD student with PI. Hirmas) (**Current**).

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 (**Current**).

2020 United States Department of Agriculture (9/1/2020-8/31/2025): 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 (**Current**).

2020 National Science Foundation CAREER (4/1/2020-3/31/2025): 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: \$362,000, Candidate Amount: \$347,000 (**Current**).

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 (**Current**).

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

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](#).

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 Activities

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 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

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

Editorial Boards:

Associate Editor Hydrological Sciences Journal, Impact Factor: 3.942, 2017–2023

Associate Editor Journal of Hydrology, Impact Factor: 6.708, 2019-Present

Associate Editor California Agriculture: Impact Factor: 2.314, 2017-Present

External Editorial Board Member, Geological Survey of Denmark and Greenland Bulletin (2020-Present)

Editor Journal of Hydrology-X: Impact Factor: 4, 12/2023-Present

Grant 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

Panel Member:

National Science Foundation

NASA Terrestrial Hydrology Program

USDA AFRI

Outstanding Student Presenter Award Judge, American Geophysical Union, Fall 2017 and Fall 2019, 2022 meetings

Board Member, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) 2023-Present

DEI Standing Committee Member, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2021-2023

Conference Organizing:

1. **Co-convended 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
2. **Co-convended 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
3. 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)
4. **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. Orłowski, S.T. Allen, E.J. Olson, **H. Ajami**.

5. **Co-convended 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
 6. **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**
 7. **Organized 2019 W3188: Soil, Water, and Environmental Physics Across Scales Multi-State Annual meeting**, January 2019, University of California Riverside
 8. **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
 9. **Workshop Organizing Committee Member, R'Water Collaborative Workshop, 2018 Fall meeting**, University of California Riverside
 10. **Moderator, UC Water Annual meeting, 2018 Fall meeting**, Reimagining California Water Fourth Annual Meeting, Sacramento, CA
 11. **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.
 12. **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**
 13. **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**.
 14. **2010-2012, Organizer of Hydrology Monthly Meeting Seminars**, School of Civil & Environmental Engineering, University of New South Wales Australia.
- 2018-2019- Chair, W3188: Soil, Water, and Environmental Physics Across Scales**
USDA Multi-state project
- 2017 – 2018- Secretary, W3188: Soil, Water, and Environmental Physics Across Scales**
USDA Multi-state project

2018-Tenth Biennial Rosenberg Forum (Panel member), 10/2018, Sustainable Groundwater Management: The Path Forward, Candidate was invited to participate in the panel discussions.

University and Public Service

Thesis/Dissertation Committee:

1. Alyssa Duro, MS, Environmental Sciences, UC Riverside (Chair)
2. Tiantian Zhou, PhD, Environmental Sciences, UC Riverside
3. Amninder Singh, PhD, Environmental Sciences, UC Riverside
4. Win Cowger, PhD, Environmental Sciences, UC Riverside
5. James Guilinger, PhD, Environmental Sciences, UC Riverside
6. Aarushi Jhatro, MS, Environmental Sciences, UC Riverside (Chair)
7. Nathan Jumps, MS, Environmental Sciences, UC Riverside
8. Setrag Cherchian, MS, Environmental Sciences, UC Riverside
9. Jing Liang, PhD, Environmental Sciences, UC Riverside
10. Quynh Tran, PhD, Chemical and Environmental Engineering, UC Riverside
11. Bushra Naseem, PhD, Civil and Environmental Engineering, University of New South Wales Australia
12. 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 (2), 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 & Oral Exams, UC Riverside
11. Yuhua Situ, Environmental Sciences, Written Exam, UC Riverside, Chair
12. Talha Rafiq, Environmental Sciences, Oral Exam, UC Riverside
13. Stefano Casirati, Environmental Systems, Oral Exam, UC Riverside
14. Zahra Amiri, Environmental Sciences, Written Exam, UC Riverside
15. Kristin Hamilton, Environmental Sciences, Written Exam, UC Riverside, Chair
16. Alyssa Duro, Environmental Sciences, Written Exam, UC Riverside, Chair
17. Alyssa Valdez, Environmental Sciences, Written Exam, UC Riverside, Chair
18. Michael Lum, Environmental Sciences, Written Exam, UC Riverside, Chair
19. Clare Murphy-Hagan, Environmental Sciences, Written Exam, UC Riverside
20. Ben Newcomb, Environmental Sciences, Written Exam, UC Riverside
21. Karlee Rivera, Earth and Planetary Sciences, UC Riverside

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.Ditiro 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

Outreach

California Agriculture Summit (Panel member), 5/2019, Larta Institute and UC Riverside, Candidate gave a short talk and served as a water panel member.

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.

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

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.

Western Growers Association (Panel member), 2/2018, Innovation in the Imperial Valley, Candidate discussed water related issues in the region.

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.

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

Antelope Valley Scoping Meeting, 1/2017, Fugitive Dust Control in the Antelope Valley: Everything Depends on Water and Vegetation, Group presentation

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 Science Society of America (SSSA), 2018-2019

Groundwater Resources Association of California, 2017-2018

International Association of Hydrogeologists, 2010-2015