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EDUCATION:

Degree	Discipline	Institution	Year
BS	Civil and Environmental Eng.	Ferdowsi University of Mashhad	2007
MS	Civil and Environmental Eng.	University of Tehran	2010
PhD	Civil and Environmental Eng.	University of California, Irvine	2015

ACADEMIC EXPERIENCE:

- Boise State University – Civil Engineering, Associate Professor (2023 – present).
- United Nations University's Institute for Water, Environment and Health – Senior Research Fellow and Climate and Wildfire Analytics Lead (2023 – present)
- Boise State University – Civil Engineering, Assistant Professor (2017 – 2023).
- University of California, Irvine – Postdoctoral Scholar (2015 – 2016)

HIGHLIGHTED PEER-REVIEWED PUBLICATIONS:

(Advised students are underlined.)

1. **Sadegh, M.,** Abatzoglou, J.T., AghaKouchak, A., Seydi, S.T., 2025, Ignition matters, ***Nature Sustainability****, in press.*
2. Modaresi Rad, A., Abatzoglou, J.T., Fleishman, E., Mockrin, M.H., Radeloff, V.C., Pourmohamad, Y., Cattau, M., Johnson, J.M., Higuera, P., Nauslar, N.J., **Sadegh, M.,** 2023, Social vulnerability of the people exposed to wildfires in U.S. West Coast states, ***Science Advances***, 9, eadh4615.
3. Modaresi Rad, A., Abatzoglou, J.T., Kreitler, J., Alizadeh, M.R., AghaKouchak, A., Hudyma, N., Nauslar, N., **Sadegh, M.,** 2023, Human and infrastructure exposure to large wildfires in the United States, ***Nature Sustainability***, https://doi.org/10.1038/s41893-023-01163-z.
4. Alizadeh, M.R., Abatzoglou, J.T., Adamowski, J., Modaresi Rad, A., AghaKouchak, A., Pausata, F.S.R., **Sadegh, M.,** 2023, Elevation-dependent intensification of fire danger in the western United States, ***Nature Communications***, 14, 1773.
5. Alizadeh, M.R., Abatzoglou, J.T., Luce, C.H., Adamowski, J., Farid, A., **Sadegh, M.,** 2021, Warming Enabled Upslope Advance in Western U.S. Forest Fires, ***Proceedings of the National Academy of Sciences of the USA***, 118 (22), e2009717118.
6. Alizadeh, M.R., Adamowski, J., Nikoo, M.R., AghaKouchak, A., Dennison, P., **Sadegh, M.** 2020, A Century of Observations Reveal Increasing Likelihood of Continental-Scale Compound Dry-Hot Extremes, ***Science Advances***, 6, eaaz4571.

7. Khorshidi, M.S., Dennison, P.E., Nikoo, M.R., AghaKouchak, A., Luce, C.H., **Sadegh, M**., 2020, Increasing concurrence of wildfire drivers tripled megafire critical danger days in Southern California between 1982-2018, ***Environmental Research Letters,*** 15(10), p.104002.
8. Fowler, M., Modaresi Rad, A.M., Utych, S., Adams, A., Alamian, S., Pierce, J., Dennison, P., Abatzoglou, J.T., AghaKouchak, A., Montrose, L., and **Sadegh, M.**, 2019, A dataset on human perception of and response to wildfire smoke, ***Scientific Data***, 6, 229.

GRANTS:

1. EPSCoR Research Fellows: NSF: Enhanced Predictive Understanding of Wildfire Ignitions in the Face of Changing Socioenvironmental Landscape, ***National Science Foundation***, 12/01/2024 – 11/30/2026, $297,813, **Role: PI.**
2. Soil Burn Severity Prediction Using Remote Sensing and Machine Learning***, National Aeronautics and Space Administration***, 01/01/2025 – 12/31/2027, $149,860, **Role: PI (Future Investigator: Amirhossein Montazeri)**
3. Machine Learning Classification of Unknown Fire Causes in Western US, ***Joint Fire Science Program***, 09/01/2024 – 08/31/2025, $25,000, **Role: PI (Student Investigator: Yavar Pourmohamad)**.
4. Idaho Community-engaged Resilience for Energy-Water Systems (I-CREWS), ***National Science Foundation***, 08/01/2023 – 07/31/2028, $24,000,000, **Role: Senior Personnel**.
5. Science-driven Equitable Solutions to Wildfire Smoke and Excessive Heat Impacts in Idaho, ***Boise State Grand Challenges***, 01/11/2023 – 06/30/2024, $199,958, **Role: PI.**
6. Machine Learning approach to forecast human-caused wildfires at actionable scales across the western US, ***Joint Fire Science Program (Department of the Interior),*** 09/01/2021 – 08/31/2024, $499,524, **Role: PI.**
7. Resolving Spatiotemporal Distribution of Suspended Sediment Concentration over the Columbia and Snake River Using Remote Sensing, ***U.S. Bureau of Reclamation (Department of the Interior)***, 05/10/2021 – 05/09/2023, $131,310, **Role: PI.**
8. Scholarships and Supports to Increase Access to and Completion of Masters Degrees in Engineering, ***National Science Foundation***, 10/1/2019 – 09/30/2024, $1,197,918, **Role: Co-PI**.
9. Remote Sensing of Wildfire-induced Suspended Sediment Concentration, ***Boise State College of Engineering***, 07/01/2020 – 05/01/2021, $9,994, **Role: PI**.
10. Remote sensing of agricultural irrigation types: Inference through deep learning, ***Amazon Web Services***, 05/01/2019 – 04/30/2020, $44,300, **Role: PI**.
11. Statistical analysis of HMA production and construction data to improve quality assurance, ***Idaho Transportation Department***, 07/01/2018 – 06/30/2021, $140,000, **Role: PI**.
12. Planning grant: Engineering research center for fire impacts, remediation, and education (FIRE), ***National Science Foundation***, 09/01/2018 – 08/31/2019, $99,806, **Role: Co-PI**.

SELECTED HONORS AND AWARDS:

- **2024 Boise State University Foundation Excellence Award**
- **2023 American Geophysical Union Natural Hazards Early Career Award**
- **2021 Golden Apple Award** for the College of Engineering of Boise State University for Offering Inclusive Learning Experiences.
- **2020 Editors' Citation for Excellence in Refereeing for *Earth's Future***

- **2019 Editors' Citation for Excellence in Refereeing for *Earth's Future***
- **2017 Editor's Citation for Excellence in Refereeing for *Water Resources Research.***
- **2022 Service Recognition Award,** Boise State University
- **The Henry Samueli Endowed fellowship** ($25,000), University of California, Irvine, 2010.

EDITORIAL ACTIVITIES:

- **Associate Editor: Earth's Future, AGU, 2022-present**
- **Editorial Board Advisor: Drought and Climate Change Research Journal, 2024-present**
- **Associate Editor: Hydrological Science Journal, IAHS, 2020-2024.**
- **Associate Editor: Journal of Hydrologic Engineering, ASCE, 2019-2023.**
- **Guest Editorial Board Member: Scientific Data, Nature, 2019-2019.**

OTHER PEER-REVIEWED PUBLICATIONS:

9. Seydi, S.T., **Sadegh, M.**, Chanussot, J., 2025, Kolmogorov-Arnold Network for Hyperspectral Change Detection, ***IEEE Transactions on Geoscience and Remote Sensing***, *in press*.
10. Kumar, M., AghaKouchak, A., Abatzoglou, J.T., **Sadegh, M.,** 2025, Compounding Effects of Climate Change and WUI Expansion Quadruple the Likelihood of Extreme-impact Wildfires in California, ***npj Natural Hazards***, *in press*.
11. Pourmohamad, Y., Abatzoglou, J.T., Fleishman, E., Short, K.C., Shuman, J., AghaKouchak, A., Williamson, M., Seydi, S.T., **Sadegh, M**., 2025, Inference of Wildfire Causes from Their Physical, Biological, Social and Management Attributes, ***Earth's Future***, *13, e2024EF005187*. *https://doi.org/10.1029/2024EF005187*.
12. Seydi, ST, Pierce, J., Abatzoglou, J.T., Radin, A., Sims, E., Flint, H., Wicks, S., Henderson, E., Chittoori, B., **Sadegh, M.**, 2025, Patterns and Trends of Heat and Wildfire Smoke Indicators Across Rural-Urban and Social Vulnerability Gradients in Idaho, ***Environmental Research: Health***, *3, 015009*.
13. Abatzoglou, J., Fleishman, E., Williams, E., Rupp, D., Jenkins, J. **Sadegh, M.,** 2024, The Efficacy of Red Flag Warning in Mitigating Human-Caused Wildfire across the Western United States, ***Journal of Applied Meteorology and Climatology***, *63, 1511–1521, https://doi.org/10.1175/JAMC-D-24-0120.1*.
14. Seydi, S.T., Abatzoglou, J.T., AghaKouchak, A., Pourmohamad, Y., Mishra, A., **Sadegh, M**., 2024. Predictive understanding of links between vegetation and soil burn severities using physics-informed machine learning. ***Earth's Future***, *12(8), p.e2024EF004873*.
15. Nikraftar, Z., Mbuvha, R., **Sadegh, M.,** Landman, W., 2024, Impact-based Skill Evaluation of Seasonal Precipitation Forecasts, ***Earth's Future***, 12, e2024EF004936**.**
16. Pourmohamad, Y., Abatzoglou, J.T., Belval, E.J., Fleishman, E., Short, K., Reeves, M.C., Nauslar, N., Higuera, P.E., Henderson, E., Ball, S. and Aghakouchak, A., Prestemon, J.P., Olszewski, J., **Sadegh, M.,** 2024. Physical, Social, and Biological Attributes for Improved Understanding and Prediction of Wildfires: FPA FOD-Attributes Dataset. ***Earth System Science Data***, 16(6), pp.3045-3060.
17. Volpi, E., Grimaldi, S., Aghakouchak, A., Castellarin, A., Chebana, F., Papalexiou, S.M., Aksoy, H., Bárdossy, A., Cancelliere, A., Chen, Y., Deidda, R., Haberlandt, U., Eris, E., Fischer, S., Francés, F., Kavetski, D., Kjeldsen, T.R., Kochanek, K., Langousis, A., Mediero, L., Montanari, A., Nerantzaki, S.D., Ouarda, T.B.M.J., Prosdocimi, I., Ragno, E., Rajulapati, C.R., Requena, A.I., Ridolfi, E., **Sadegh, M.,** Schumann, A., Sharma, A., 2024, The legacy

of STAHY: Milestones, achievements, challenges, and open problems in statistical hydrology, ***Hydrological Sciences Journal***, 69(14), pp.1913-1949.
18. Farid, A., Alam, MK, Goli, VSNS, Akin, ID, Akinleye, T., Chen, X., Cheng, Q., Cleall, P., Cuomo, S., Foresta, V., Ge, S., Iervolino, L., Iradukunda P., Luce, CH, Mickovski, EKSB, O'Kelly, BC, Paleologos, EK, Peduto, D, Ricketts, EJ, **Sadegh, M,** Sarris, TS, Singh, DN, Singh, P, Tang, CS, Tardio, G, Vaverková, MD, Veneris, M, Winkler, J, 2024, A Review of Occurrence and Causes for Wildfires and their Impacts on the Geoenvironment, ***Fire***, 7(8), p.295.
19. Vahedifard, F., Abdollahi, M., Leshchinsky, B.A., Stark, T.D., **Sadegh, M.,** AghaKouchak, A., 2024, Interdependencies between Wildfire-Induced Alterations in Soil Properties, Near-Surface Processes, and Geohazards, ***Earth and Space Science***, 11(2), p.e2023EA003498.
20. Monje, K., **Sadegh, M.,** Talreja, N., 2024. Peanut vs Other Food Oral Immunotherapy: Trends from an Outpatient Allergy Clinic in Boise, ID. ***Journal of Allergy and Clinical Immunology****, 153(2), p.AB122*. https://doi.org/10.1016/j.jaci.2023.11.405
21. Fallon, K., Wheelock, S.J., **Sadegh, M.,** Pierce, J.L., McNamara, J.P., Cattau, M., Baker, V.R., 2023, Postfire Hydrologic Analysis: A Tale of Two Severities, ***Hydrological Sciences Journal,*** DOI: 10.1080/02626667.2023.2284306**.**
22. Ahmadi, A., Daccache, A., **Sadegh, M.,** Snyder, R.L., 2023, Statistical and Deep Learning Models for Reference Evapotranspiration Time Series Forecasting: A Comparison of Accuracy, Complexity, and Data Efficiency, ***Computers and Electronics in Agriculture***, 215, 108424.
23. AghaKouchak, A., Huning, L., **Sadegh, M.,** Qin, Y., Markonis, Y., Vahedifard, F., Love, C., Mishra, A., Mehran, A., Obringer, R., Hjelmst, A., Pallickara, S., Jiwa, S., Hanel, M., Zhao, Y., Pendergrass, A., Arabi, M., Davis, S., Ward, P., Svoboda, M., Pulwarty, R., Kreibich, H., 2023, Toward impact-based monitoring of drought and its cascading hazards, ***Nature Reviews Earth & Environment***, https://doi.org/10.1038/s43017-023-00457-2.
24. Seydi, S.T., **Sadegh, M.,** 2023, Improved Burned Area Mapping Using Mono-temporal Landsat-9 Imagery and Convolutional Shift-Transformer, ***Measurement***, 216, 112961.
25. Abatzoglou, J.T., Kolden, C., Williams, P., **Sadegh. M.**, Balch, J., Hall, A., 2023, Downslope wind-driven fires in the western United States, ***Earth's Future***, 11 (5), e2022EF003471.
26. Moqbeli Damane, M., Gholami Sharafkhane, M., Sanaeinejad, S.H., **Sadegh, M.,** 2023, Two-Source Energy Balance Model (TSEB) Evaluation for Evapotranspiration Partitioning of Corn under Drip Irrigation in Farm Scale (in Farsi), ***Iranian Journal of Soil and Water Research****, doi: 10.22059/ijswr.2023.351695.669403.*
27. Shinneman, D., Strand, E.k., Pellant, M., Abatzoglou, J.T., Brunson, B., Glenn, N.F., Heinrichs, J.A., **Sadegh, M.**, Vaillant, N.M., 2023, Future direction of fuels management in sagebrush rangelands, ***Rangeland Ecology & Management***, 86, 50-63.
28. Jafari, S.M., Nikoo, M.R., **Sadegh, M.**, Chen, M., Gandomi, A.H., 2023, Non-Parametric Severity-Duration-Frequency Analysis of Drought based on Satellite-based Product and Model Fusion techniques, ***Environmental Science and Pollution Research,*** 30, 42087–42107.
29. Maghrebi, M., Noori, R., **Sadegh, M.**, Sarvarzadeh, F., Akbarzadeh, A.E., Karandish, F., Barati, R., Taherpour, H., 2023, Anthropogenic Decline of Ancient, Sustainable Water Systems: Qanats, ***Groundwater***, 13248.

30. AghaKouchak, A., Pan. B., Mazdiyasni, O., **Sadegh, M.,** Zhang, W., Love, C.A., Madadgar, S., Papalexiou, S.M., Davis, S.J., Hsu, K., Sorooshian, S., 2022, Status and prospects for drought forecasting: Opportunities in Artificial Intelligence and Hybrid Physical-Statistical Forecasting, ***Philosophical Transactions of the Royal Society A***, 380: 20210288.
31. Maghrebi, M., Danandeh Mehr, A., Karrabi, S.M., **Sadegh, M.,** Partani, S., Ghiasi, B., Nourani, V., 2022, Spatiotemporal variations of air pollution during the COVID-19 pandemic across Tehran, Iran: commonalities with and differences from global trends, ***Sustainability***, 14, 16313.
32. Shuman, J.K., Balch, J.K., Barnes, R.T., Higuera, P.E., …., **Sadegh, M.,** … , 2022, Reimagine Fire Science for the Antropocene, ***PNAS Nexus***, pgac115.
33. Razavi, S., Hannah, D.M., Elshorbagy, A., Kumar, S., Marshall, L., Solomatine, D.P., Dezfuli, A., **Sadegh, M.**, Famiglietti, J., 2022, Coevolution of Machine Learning and Process-based Modelling to Revolutionize Earth and Environmental Sciences: A Perspective, ***Hydrological Processes***, 36, e14596.
34. Raei, E., Akbari Asanjan, A., Nikoo, M.R., **Sadegh, M.**, Pourshahabi, S., Adamowski, J.F., 2022, A Deep Learning Image Segmentation Model for Agricultural Irrigation System Classification, ***Computers and Electronics in Agriculture***, 198, 106977.
35. ModaresiRad, A., Kreitler, J., Abatzoglou, J.T., Falon, K., Roche, K., **Sadegh, M.,** 2022, Anthropogenic Stressors Compound Climate Impacts on Inland Lake Dynamics: The Case of Hamun Lakes, ***Science of the Total Environment***, 829, 154419.
36. Karimidastenaei, Z., Avellán, T., Sadegh, M., Kløve, B., Torabi Haghighi, A., 2022, Unconventional Water Resources: Global opportunities and challenges, ***Science of the Total Environment***, 827, 154429.
37. Mallakpour, I., Sadeghi, M., Mosaffa, H., Akbari Asanjan, A., **Sadegh, M.,** Nguyen, P., Sorooshian, S., AghaKouchak, A., 2022, Discrepancies in changes in precipitation characteristics over the contiguous United States based on six daily gridded precipitation datasets, ***Weather and Climate Extremes,*** 36, 100433.
38. Pearson, J., Giacumo, L.A., Farid, A., **Sadegh, M.**, 2022, A Systematic multiple studies review of low-income, first-generation, and underrepresented, STEM-degree support programs: Emerging evidence-based models and recommendations, ***Education Sciences,*** 12(5), 333.
39. Ahmadi, A., Olyaei, M., Heydari, Z., Emami, M., Zeynolabedin, A., Ghomlaghi, A., Daccache, A., Fogg, G., Sadegh, A., 2022, Groundwater Modeling and Prediction with Machine Learning: A Systematic Review and Meta-analysis, ***Water***, 14(6), 949.
40. Alizadeh, M.R., Abatzoglou, J.T., Adamowski, J., Prestemon, J.P., Chittoori, B., Akbari Asanjan, A., **Sadegh, M.,** 2022, Increasing heat-stress inequality in a warming climate, ***Earth's Future***, 10, e2021EF002488.
41. Tootoonchi, F., **Sadegh. M.,** Haerter, J.O., Rati, O., Grabs, T., Teutschbein, C., 2022, Copulas for hydroclimatic analysis: A practice-oriented overview, ***WRIES: Water***, 9(2), e1579.
42. Shojaeezadeh, S., Nikoo, M.R., Talebbeydokhti, N., **Sadegh, M.**, Adamowski, J., 2022, Process-constrained Statistical Modeling of Sediment Yield, ***Catena***, 209 (1), 105794.
43. Nikraftar, Z., Mostafaie, A., **Sadegh, M.,** Afkueiehd, J.H., Pradhan, B., 2021, Multi-type assessment of global droughts and teleconnections, ***Weather and Climate Extremes***, 34, 100402.

44. Noori, R., Maghrebi, M., Mirchi, A., Tang, Q., Bhattarai, R., **Sadegh, M.**, Noury, M., Torabi Haghighi, A., Kløve, B., Madani, K., 2021, Anthropogenic Depletion of Iran's Aquifers, ***Proceedings of the National Academy of Sciences of the USA***, 118 (25) e2024221118.
45. Abatzoglou, J.T., Rupp, D., O'Neill, L., **Sadegh, M.,** 2021, Compound extremes drive the western Oregon wildfires of September 2020, ***Geophysical Research Letters***, 48, e2021GL092520.
46. Karimidastenai, Z., Kløve, B. Torabi Haghighi, A., **Sadegh, M.,** 2021, Polar ice as an unconventional water resource: Opportunities and challenges, ***Water,*** 13(22), 3220.
47. Salman, R., Nikoo, M.R., Shojaeezadeh, S.A., Hatami B.B., P., **Sadegh, M.,** Adamowski, J.F., Alamdari, N., 2021, A novel Bayesian maximum entropy-based approach for optimal design of water quality monitoring networks in rivers, ***Journal of Hydrology***, 603, 126822.
48. ModaresiRad, A., Kreitler, J., **Sadegh, M.,** 2021, Augmented Normalized Difference Water Index for Improved Surface Water Monitoring, ***Environmental Modeling & Software,*** 140, 105030.
49. Vanda, S., Nikoo, M.R., Taravatrooy, N., **Sadegh, M.,** Al-Wardy, M., Adamowski, J.F., 2021, An emergency multi-objective compromise framework for reservoir operation under suddenly injected pollution, ***Journal of Hydrology***, 598, 126242.
50. AghaKouchak, A., Mirchi, A., Madani, K., Di Baldassarre, G., Nazemi, Al., Alborzin, A., Anjileli, H., Azarderakhsh, M., Chiang, F., Hassanzadeh, E., Hunning, L.S., Mallakpour, I., Martinez, A., Mazdiyasni, O., Moftakhari, H., Norouzi, H., **Sadegh, M.**, Sadeqi, D., Van Loon, A.F., Wanders, N. 2021, Anthropogenic Drought: Definition, Challenges and Opportunities, ***Reviews of Geophysics***, 59, e2019RG000683.
51. Hashempour Bakhtiari, P., Nikoo, M.R., Golkar, F., **Sadegh, M.**, Al-Wardy, M., Al-Rawas, G.A., 2021, Design of a high-coverage ground-based CO2 monitoring layout using a novel information theory-based optimization model, ***Environmental Monitoring and Assessment***, 193, 150.
52. Srivastava, A.K., Grotjahn, R., Ullrich, P., **Sadegh, M.**, 2021, Pooling data improves multimodel IDF estimates over median-based IDF estimates: Analysis over Susquehanna and Florida. ***Journal of Hydrometeorology***, 22, 971–995.
53. Gajurel, A., Chittoori, B., Mukherjee, P.S., **Sadegh, M.,** 2021, Machine Learning Methods to Map Stabilizer Effectiveness based on Common Soil Properties, ***Transportation Geotechnics***, 27, p.100506.
54. Madadgar, S., **Sadegh, M.**, Chiang, F., Ragno, E., AghaKouchak, A. 2020, Quantifying Increased Fire Risk in California in Response to Different Levels of Warming and Drying, ***Stochastic Environmental Research and Risk Assessment***, 34(12), 2023-2031.
55. Haghighat, M., Nikoo, M.R., Parvinnia, M., **Sadegh, M**., 2020, Multi-objective conflict resolution optimization model for reservoir's selective depth water withdrawal considering water quality, ***Environmental Science and Pollution Research,*** 28(3), 3035-3050.
56. Vosoughi, F., Rakhshandehroo, G.R., Nikoo, M.R., **Sadegh, M.**, 2020, Experimental Study and Numerical Verification of Silted-Up Dam Break, ***Journal of Hydrology***, 590, 125267.
57. Torabi, A., **Sadegh, M.**, Bhattacharjee, J., Sönmez, M.E., Noury, M., Yilmaz, N., Noori, R., Kløve, B., 2020, The impact of river regulation in the Tigris and Euphrates on the Arvandroud Estuary, ***Progress in Physical Geography***, 44(6), 948-970.
58. **Sadegh, M.**, AghaKouchak, A., Mallakpour, I., Hunning, L.S., Mazdiyasni, O., Niknejad, M., Foufoula-Georgiou, E., Moore, F.C., Brouwer, J., Burney, J.A., Farid, A., Alizadeh,

M.R., Martinez, A., Mueller, N.D., Davis, S.J., 2020, Data and analysis toolbox for modeling the nexus of food, energy, and water, ***Sustainable Cities and Society***, 61, 102281.

59. Ghorbani Mooselu, M., Nikoo, M.R., Latifi, M., **Sadegh, M.**, Al-Wardy, M., Al-Rawas, G.A., 2020, A multi-objective optimal allocation of treated wastewater in urban areas using leader-follower game, ***Journal of Cleaner Production***, 267, 122189.
60. Mallakpour, I., **Sadegh, M.**, AghaKouchak, A., 2020, Changes in the exposure of California's Levee-Protected Critical Infrastructure to flooding hazard in a warming climate, ***Environmental Research Letters***, 15, 064032.
61. Khaksar Fasaee, M.A., Nikoo, M.R., Hashempour Bakhtiari, P., Monghasemi, S., **Sadegh, M.**, 2020, A Novel Dynamic Hydrant Flushing Framework Facilitated by Categorizing Contamination Events, ***Urban Water Journal***, 17(3), 199-211.
62. Taravatrooy, N., Nikoo, M.R., Hobbi, S., Sadegh, M., Izady, A., 2020, A novel hybrid entropy-clustering approach for optimal placement of pressure sensors for leakage detection in water distribution systems under uncertainty, ***Urban Water Journal***, 17(3), 185-198.
63. AghaKouchak, A., Chiang, F., Huning, L., Love, C.L., Mallakpour, I., Mazdiyasni, O., Moftakhari, H., Papalexiou, S.M., Ragno, E., **Sadegh, M.**, 2020, Climate Extremes and Compound Hazards in a Warming World, ***Annual Review of Earth and Planetary Sciences,*** 48:1.
64. ModaresiRad, A., Ghahraman, B., Mosaedi, A., **Sadegh, M.**, 2020, A universal model of unsaturated hydraulic conductivity with complementary adsorptive and diffusive process components, ***Water Resources Research***, 56 (2), e2019WR025884.
65. Khorshidi, M.S., Nikoo, M.R., Taravatrooy, N., **Sadegh, M.,** Al-Wardy, M., Al-Rawas, G.A., 2020, Pressure sensor placement in water distribution networks for leak detection using a hybrid information-entropy approach, ***Information Sciences***, 516, 56-71.
66. Shojaeezadeh, S.A., Nikoo, M.R., Mirchi, A., Mallakpour, I., AghaKouchak, A., and **Sadegh, M.**, 2020, Probabilistic Hazard Assessment of Contaminated Sediment in Rivers, ***Science of the Total Environment***, 703, 134875.
67. Haghighi, A. T., **Sadegh, M.**, Behrooz-Koohenjani, S., Hekmatzadeh, A.K., Karimi, A., and Klove, B., 2020, The 'mirage water' concept and an index-based approach to quantify causes of hydrological changes in semi-arid regions, ***Hydrological Sciences Journal***, 65(2), 311-324.
68. Bananmah, M., Nikoo, M.R., Nematollahi, B. and **Sadegh, M.**, 2020. Optimizing Chute-Flip Bucket System Based on Meta-Modelling Approach. ***Canadian Journal of Civil Engineering***, 47(5), 584-595.
69. Shoorangiz, M., Nikoo, M.R., Salari, M., Rakhshandehroo, G.R., **Sadegh, M.**, 2019, Optimized electro-Fenton process with sacrificial stainless steel anode for degradation/mineralization of Ciprofloxacin, ***Process Safety and Environmental Protection***, 132, 340-350.
70. Mazdiyasni, O., **Sadegh, M.**, Chiang, F., AghaKouchak, A., 2019, Heat wave Intensity Duration Frequency Curve: A Multivariate Approach for Hazard and Attribution Analysis, ***Scientific Reports***, *9*, 14117.
71. Mallakpour, I., AghaKouchak, A. and **Sadegh, M.**, 2019. Climate-Induced Changes in the Risk of Hydrological Failure of Major Dams in California. ***Geophysical Research Letters***, *46(4)*, pp.2130-2139.

72. Latifi, M., Rakhshandehroo, G., Nikoo, M.R. and **Sadegh, M.**, 2019. A game theoretical low impact development optimization model for urban storm water management. ***Journal of Cleaner Production***, *241*, p.118323.
73. **Sadegh, M.**, AghaKouchak, A., Flores, A., Mallakpour, I. and Nikoo, M.R., 2019. A Multi-Model Nonstationary Rainfall-Runoff Modeling Framework: Analysis and Toolbox. ***Water Resources Management***, *33(9)*, pp.3011-3024.
74. Ragno, E., AghaKouchak, A., Cheng, L. and **Sadegh, M.**, 2019. A Generalized Framework for Process-informed Nonstationary Extreme Value Analysis. ***Advances in Water Resources***, *130*, pp. 270-282.
75. Mooselu, M.G., Nikoo, M.R. and **Sadegh, M.**, 2019. A fuzzy multi-stakeholder socio-optimal model for water and waste load allocation. ***Environmental monitoring and assessment,*** *191*(6), p.359.
76. Khorshidi, M.S., Nikoo, M.R., **Sadegh, M.** and Nematollahi, B., 2019. A Multi-Objective Risk-Based Game Theoretic Approach to Reservoir Operation Policy in Potential Future Drought Condition. ***Water Resources Management***, *33*(6), pp.1999-2014.
77. Rad, A.M., Ghahraman, B. and **Sadegh, M.**, 2019. Revising tortuosity and multi-fractal assumptions of unsaturated hydraulic conductivity from critical path analysis of percolation theory. ***Geoderma***, *352*, pp.213-227.
78. Khorshidi, M.S., Nikoo, M.R., Ebrahimi, E. and **Sadegh, M.**, 2019. A robust decision support leader-follower framework for design of contamination warning system in water distribution network. ***Journal of Cleaner Production***, 214, pp.666-673.
79. Raei, E., Nikoo, M.R., Pourshahabi, S. and **Sadegh, M.**, 2019. Optimal joint deployment of flow and pressure sensors for leak identification in water distribution networks. ***Urban Water Journal***, 15(9), pp.837-846.
80. Tayebikhorami, S., Nikoo, M.R. and **Sadegh, M.**, 2019. A fuzzy multi-objective optimization approach for treated wastewater allocation. ***Environmental Monitoring and Assessment***, *191*(7), p.468.
81. Modaresi Rad, A., Ghahraman, B., Mosaedi, A., **Sadegh, M.,** 2019, Evaluating the prediction of two unsaturated hydraulic conductivity models by considering parameters' uncertainty, ***Iranian Journal of Irrigation and Drainage (in Farsi)***, 13(5), 1515-1526.
82. AghaKouchak, A., Huning, L.S., Chiang, F., **Sadegh, M.**, Vahedifard, F., Mazdiyasni, O., Moftakhari, H. and Mallakpour, I., 2018. How do natural hazards cascade to cause disasters? ***Nature***, 458.
83. Raei, E., Nikoo, M.R., AghaKouchak, A., Mazdiyasni, O. and **Sadegh, M.**, 2018. GHWR, a multi-method global heatwave and warm-spell record and toolbox. ***Scientific data***, *5*, p.180206.
84. Shojaeezadeh, S.A., Nikoo, M.R., McNamara, J.P., AghaKouchak, A. and **Sadegh, M.**, 2018. Stochastic modeling of suspended sediment load in alluvial rivers. ***Advances in water resources***, *119*, pp.188-196.
85. **Sadegh, M.**, Moftakhari, H., Gupta, H.V., Ragno, E., Mazdiyasni, O., Sanders, B., Matthew, R. and AghaKouchak, A., 2018. Multi-hazard scenarios for analysis of compound extreme events. ***Geophysical Research Letters***, 45, 5470–5480.
86. Khorshidi, M.S., Nikoo, M.R. and **Sadegh, M.**, 2018. Optimal and objective placement of sensors in water distribution systems using information theory. ***Water research***, *143*, pp.218-228.

87. Alborzi, A., Mirchi, A., Moftakhari, H., Mallakpour, I., Alian, S., Nazemi, A., Hassanzadeh, E., Mazdiyasni, O., Ashraf, S., Madani, K., Norouzi, H., Azarderakhsh, M., Mehran, A., **Sadegh, M.**, Castelletti, A., and AghaKouchak, A., 2018. Climate-informed environmental inflows to revive a drying lake facing meteorological and anthropogenic droughts. ***Environmental Research Letters***, *13*(8), p.084010.
88. **Sadegh, M.**, Majd, M.S., Hernandez, J. and Haghighi, A.T., 2018. The Quest for Hydrological Signatures: Effects of Data Transformation on Bayesian Inference of Watershed Models. ***Water Resources Management***, *32*(5), pp.1867-1881.
89. Ashraf, S., AghaKouchak, A., Nazemi, A., Mirchi, A., **Sadegh, M.**, Moftakhari, H.R., Hassanzadeh, E., Miao, C.Y., Madani, K., Baygi, M.M., Anjileli, H., Arab, D.R., Norouzi, H., Mazdiyasni, O., Azarderakhsh, M., Alborzi, A., Tourian, M.J., Mehran, A., Farahmand, A., Mallapour, I., 2018. Compounding effects of human activities and climatic changes on surface water availability in Iran. ***Climatic Change***, *152(3-4)*, pp.379-391.
90. Didier, D., Baudry, J., Bernatchez, P., Dumont, D., **Sadegh, M.**, Bismuth, E., Bandet, M., Dugas, S. and Sévigny, C., 2018. Multihazard simulation for coastal flood mapping: Bathtub versus numerical modelling in an open estuary, Eastern Canada. ***Journal of Flood Risk Management***, *12(S1)*, p.e12505.
91. Mallakpour, I., **Sadegh, M.** and AghaKouchak, A., 2018. A new normal for streamflow in California in a warming climate: Wetter wet seasons and drier dry seasons. ***Journal of Hydrology***, *567*, pp.203-211.
92. Sedghamiz, A., Nikoo, M.R., Heidarpour, M. and **Sadegh, M.**, 2018. Developing a non-cooperative optimization model for water and crop area allocation based on leader-follower game. ***Journal of Hydrology***, *567*, pp.51-59.
93. Taravatrooy, N., Nikoo, M.R., **Sadegh, M.** and Parvinnia, M., 2018. A hybrid clustering-fusion methodology for land subsidence estimation. ***Natural Hazards***, *94*(2), pp.905-926.
94. Naeini, M.R., Yang, T., **Sadegh, M.**, AghaKouchak, A., Hsu, K.L., Sorooshian, S., Duan, Q. and Lei, X., 2018. Shuffled Complex-Self Adaptive Hybrid EvoLution (SC-SAHEL) optimization framework. ***Environmental Modelling & Software***, *104*, pp.215-235.
95. **Sadegh, M.**, Ragno, E. and AghaKouchak, A., 2017. Multivariate Copula Analysis Toolbox (MvCAT): Describing dependence and underlying uncertainty using a Bayesian framework. ***Water Resources Research***, *53*(6), pp.5166-5183.
96. Mazdiyasni, O., AghaKouchak, A., Davis, S.J., Madadgar, S., Mehran, A., Ragno, E., **Sadegh, M.**, Sengupta, A., Ghosh, S., Dhanya, C.T. and Niknejad, M., 2017. Increasing probability of mortality during Indian heat waves. ***Science advances***, *3*(6), p.e1700066.
97. **Sadegh, M.**, Vrugt, J.A., Gupta, H.V. and Xu, C., 2016. The soil water characteristic as new class of closed-form parametric expressions for the flow duration curve. ***Journal of Hydrology***, *535*, pp.438-456.
98. **Sadegh, M.**, Vrugt, J.A., Xu, C. and Volpi, E., 2015. The stationarity paradigm revisited: Hypothesis testing using diagnostics, summary metrics, and DREAM (ABC). ***Water Resources Research***, *51*(11), pp.9207-9231.
99. Lochbühler, T., Vrugt, J.A., **Sadegh, M.** and Linde, N., 2015. Summary statistics from training images as prior information in probabilistic inversion. ***Geophysical Journal International***, *201*(1), pp.157-171.
100. **Sadegh, M.** and Vrugt, J.A., 2014. Approximate bayesian computation using markov chain monte carlo simulation: Dream (abc). ***Water Resources Research***, *50*(8), pp.6767-6787.

101. Vrugt, J.A. and **Sadegh, M.**, 2013. Toward diagnostic model calibration and evaluation: Approximate Bayesian computation. ***Water Resources Research***, *49*(7), pp.4335-4345.
102. **Sadegh, M.**, and J. A. Vrugt. "Bridging the gap between GLUE and formal statistical approaches: approximate Bayesian computation." ***Hydrology and Earth System Sciences*** 17, no. 12 (2013): 4831-4850.
103. **Sadegh, M.** and Kerachian, R., 2011. Water resources allocation using solution concepts of fuzzy cooperative games: fuzzy least core and fuzzy weak least core. ***Water resources management***, *25*(10), pp.2543-2573.
104. **Sadegh, M.**, Mahjouri, N. and Kerachian, R., 2010. Optimal inter-basin water allocation using crisp and fuzzy Shapley games. ***Water Resources Management***, *24*(10), pp.2291-2310.

OUTREACH PUBLICATIONS:

105. **Sadegh, M.,** Abatzoglou, J.T., 2023, Wildfire risk is soaring for low-income, elderly and other vulnerable populations in California, Washington and Oregon, ***The Conversation,*** https://tinyurl.com/23etb7m7
106. **Sadegh, M.,** Modaresi Rad, A., 2023, Increase in exposure of humans and infrastructure to large wildfires in the United States, ***Nature Sustainability***, https://www.nature.com/articles/s41893-023-01164-y.
107. **Sadegh, M.,** Human exposure to wildfires has more than doubled in two decades – who is at risk might surprise you, ***The Conversation***, https://shorturl.at/sGHQR
108. Alizadeh, M.R, **Sadegh, M.,** 2023, Fire danger in the high mountains is intensifying: That's bad news for humans, treacherous for the environment, ***The Conversation***, https://bit.ly/3AgD872
109. Alizadeh, M.R, **Sadegh, M.,** 2023, Intensification of fire danger with elevation and synchronized critical fire danger across western US mountains, ***Nature Portfolio Earth and Environment Community***, https://go.nature.com/3nFIYfb
110. **Sadegh, M.,** Abatzoglou, J.T., Alizadeh, M.R., 2022, Heat waves hit the poorest people hardest – a new study calculates the future impact on those least able to adapt, ***The Conversation:*** https://bit.ly/3uGWuAw
111. **Sadegh, M.,** Mirchi, A., AghaKouchak, A., Madani, K., 2021, Avoiding water bankruptcy in the drought-troubled Southwest: What the US and Iran can learn from each other, ***The Conversation:*** https://bit.ly/3l6nPqC
112. **Sadegh, M.,** Alizadeh, M.R., 2021, Hate heatwaves? Droughts? How about both at the same time? ***The Science Breaker:*** https://doi.org/10.25250/thescbr.brk567
113. **Sadegh, M.,** Abatzoglou, J., Alizadeh, M.R., 2021, Western fires are burning higher in the mountains at unprecedented rates in a clear sign of climate change, ***The Conversation***, https://bit.ly/2TjSTYN
114. **Sadegh, M.**, AghaKouchak, A., Abatzoglou, J., 2021, A dangerous fire season looms as the drought-stricken Western U.S. heads for a water crisis, ***The Conversation***, https://bit.ly/2ROUtRF
115. **Sadegh, M.,** Akbari Asanjan, A., Alizadeh, M.R., 2020, Wildfires force thousands to evacuate near Los Angeles: Here's how the 2020 Western fire season got so extreme, ***The Conversation***, bit.ly/31KaCde
116. **Sadegh, M.,** Pierce, J., AghaKouchak, A., Glenn, N. F. and Curl, C., 2018. Will clean air fade away?, ***AGU Eos***, *99*.

117. Khorshidi, M.S., Nikoo, M.R. and **Sadegh, M.,** 2018. Using Sensors in water distribution networks, ***Science Trends***, doi:10.31988/SciTrends.34951.

BOOK CHAPTERS:

118. **Sadegh, M.**, Love, C., Farahmand, A., Mehran, A., Tourian, M.J. and AghaKouchak, A., 2017. Multi-Sensor Remote Sensing of Drought from Space. In ***Remote Sensing of Hydrological Extremes*** (pp. 219-247). Springer, Cham.

119. ModaresiRad, A., AghaKouchak, A., Navari, M., **Sadegh, M.,** 2021. Progress, Challenges, and Opportunities in Remote Sensing of Drought. In ***Global Drought and Flood: Observation, Modeling, and Prediction.*** John Wiley & Sons Inc.

REPORTS:

120. **Sadegh, M.**, Mishra, D., Najmus Sakib, M., ModaresiRad, A., 2021, Statistical Analysis of 2018 HMA Production and Construction Data to Improve Quality Assurance and Acceptance Practices in Idaho, ***Idaho Transportation Department***, available at: https://apps.itd.idaho.gov/apps/research/completed/rp275.pdf

121. **Sadegh, M.,** Abatzoglou, J. T., Modaresi Rad, A., Montrose, L. 2021. Smoke Report: Air Quality and Wildfire Smoke in Idaho. Idaho Climate-Economy Impacts Assessment. ***James A. & Louise McClure Center for Public Policy Research, University of Idaho. Boise, ID.*** available at: https://bit.ly/3E8aIeR

ADVISED STUDENTS:

Current:

1. Kendra Fallon (PhD in Geoscience, 2019-current, Boise State University)
2. Yavar Pourmohamad (PhD in Computing, 2021-current, Boise State University)
3. Amirhossein Montazeri (PhD in Computing, 2023-current, Boise State University)
4. Seyd Teymoor Seydi (Research Scholar, 2023-current, Boise State University)
5. Ratna Raj (Research Scholar, 2024-current, Boise State University)
6. Taylor Reid (MSc in Civil Engineering, 2024-current, Boise State University)
7. Kendra Figgins (MSc in Civil Engineering, 2024-current, Boise State University)

Graduated/Former:

8. Arash Modaresi Rad (PhD in Computing, 2018-2023, Boise State University)
9. Joseph Mondragon (BSc in Civil Engineering, 2023, Boise State University)
10. Isabelle Butler (MSc in Civil Engineering, 2021-current, Boise State University)
11. Jesús Martínez-Osorio (MSc in Civil Engineering, 2021-current, Boise State University)
12. Mohamad Sasani (MSc, 2017-2018, University of California, Irvine)
13. Mariah Fowler (MSc, 2018-2019, Boise State University)
14. Mostofa Najmus Sakib (MSc, 2018-2020, Boise State University)
15. Shahjalal Chowdhury (MSc, 2019-2020, Boise State University)
16. Cheyon Sheen (BSc, 2023-2023, Boise State University)
17. Stevie Lloyd (BSc, 2021-2021, Boise State University)
18. Amber Warren (BSc, 2021-2021, Boise State University)
19. Hannah Spero (BSc, 2021-2021, Boise State University)
20. Keleigh Dockens (BSc in Civil Engineering, 2022-2022, Boise State University)

CO-ADVISED STUDENTS:

Current:

Graduated/Former:

1. Mohammad Reza Alizadeh (PhD, McGill University)
2. Zahra Karimidastenaei (PhD, University of Oulu, Finland)
3. Shahab Aldin Shojaeezadeh (PhD, Shiraz University, Iran)
4. Foad Namjoo (MSc, University of Tehran)
5. Mosayeb Moghbeli (PhD, Ferdowsi University of Mashhad, Iran)

HONORS AND AWARDS CONTINUED:

1. Outstanding Publication Award: Journal Article, Association for Educational Communications and Technology, Pearson et al. 2022
2. Featured on the cover of Nature Sustainability: ModaresiRad et al. 2023
3. Environmental Research Letters editor featured paper: Alborzi et al. 2018
4. Featured on the cover of Nature Scientific Data: Raei et al. 2019
5. Water 2024 Best Paper Award: Ahmadi et al. 2022
6. Groundwater Most Cited Papers: Maghrebi et al. 2022
7. Earth's Future Most Read Papers: Alizadeh et al. 2022

OUTREACH AND MEDIA INTERVIEWS/APPEARANCES (NON-EXHAUSTIVE):

1. As Climate Change Dries Out the West, Fourth of July Fireworks Spark Increased Wildfire Risk – 2024 – ***Inside Climate News:*** https://tinyurl.com/39szkjze
2. Wildfire-Preparation Tactics Every Community Should Consider – 2023 – ***Bloomberg:*** https://tinyurl.com/33yeh6w4
3. Why more Americans are being exposed to wildfires – 2023 – ***Boise State Public Radio – NPR:*** https://tinyurl.com/5bsxs2r3
4. Climate-fueled wildfires lead to rethink on fire tactics – 2023 – ***Deutsche Welle:*** https://tinyurl.com/5t4kwrry
5. Why did the wildfires in Maui become so devastating? – 2023 – ***NPR:*** https://tinyurl.com/ymeekzea
6. Wildfires affect people far away from the disaster, while leaving victims with mental trauma – 2023 – ***Channel news Asia:*** https://tinyurl.com/mrx74n4t
7. How the Maui Wildfires Became So Destructive, So Fast – 2023 – ***Bloomberg:*** https://tinyurl.com/e5vt6w4u
8. U.S. Wildfires Threaten More People Than Ever – 2023 – ***Scientific American***: https://tinyurl.com/2xhxjamw
9. Wildfires are burning at higher elevations across the West – 2023 – ***Utah Public Radio:*** https://tinyurl.com/2jwtd98j
10. Wildfires are climbing up the snowiest mountains of the western U.S. – 2022 – ***Mongabay***: https://bit.ly/3BUykWd
11. Ready for hottest days of 2022, Boise? When we'll see triple digits, and for how long – 2022 – ***Idaho Statesman:*** https://bit.ly/3zaVuX6
12. Could your home burn in a wildfire? – 2022 – ***Idaho Statesman:*** https://t.co/Uu6sPNID4s
13. Poorest people bear growing burden of heatwaves as temperatures rise – 2022 – ***AGU Eos:*** https://bit.ly/3rHnOga

14. California fires are burning at higher elevations than ever, creating new dangers – 2021 – ***Los Angeles Times:*** https://lat.ms/3k9rx2j
15. Western U.S. grapples with water issues amid driest year in a century – 2021 – ***The Globe and Mail***: https://tgam.ca/3jhpwAj
16. Climate Change Pushes Fires Higher Into The Mountains – 2021 – ***Boise State Public Radio News | NPR:*** https://bit.ly/399cRtH
17. A world with less water: Idaho farmers sound off on drought impacts – 2021 – ***Idaho Press:*** https://bit.ly/2XkjpD1
18. Climate-fueled wildfires ascending Wyoming's mountains, study finds – 2021 – ***Casper Star Tribune:*** https://bit.ly/3jXGuob
19. This summer was Boise's hottest on record, but it will likely be cooler than coming years – 2021 – ***Idaho Press***: https://bit.ly/2X2PYFo
20. 'Warmer no matter what': Boise weathered hottest summer on record, for now – 2021 – ***Idaho Statesman:*** https://bit.ly/3kNRAv3
21. Upslope advance of forest fires – 2021 – ***PNAS Science Sessions Podcast***: https://bit.ly/3rEYGFc
22. When will it end? Idaho heat wave to produce many more 100-degree days in Boise – 2021 – ***Idaho Statesman:*** https://bit.ly/3huAwIP
23. 'Too much at stake': Idaho scientists, fire experts urge skipping at-home July 4 fireworks – 2021 – ***Idaho Statesman:*** https://bit.ly/3wcbkft
24. The 208 for June 23: Year-round fire season – 2021 – ***KTVB:*** https://bit.ly/3xROpaL
25. 'Mega-heatwave' is peaking in the West, breaking records and intensifying drought, fires – 2021 – ***The Washington Post:*** https://wapo.st/3zIzr8P
26. 'A matter of when' it burns: Boise growth reaches areas at extreme wildfire risk – 2021 – ***Idaho Statesman:*** https://bit.ly/2ShVUs6
27. Climate change is erasing 'flammability barrier' that protects high-elevation forests – 2021 – ***NBC News:*** https://nbcnews.to/2Su7YX8
28. Mountaintops are burning because of climate change – 2021 – ***E&E News:*** https://bit.ly/3frBeqD
29. Water wars on the horizon in Iran – 2021 – ***Asia Times:*** https://bit.ly/3wC4lgv
30. Last year's wildfire season was historic for West, but Idaho escaped. How about this year? – 2021 – ***Idaho Statesman:*** https://bit.ly/3v8kYjs
31. 'Everything Is Converging': All Signs Point To An Extreme Fire Season – 2021 – ***Mountain West News Bureau:*** https://bit.ly/3eYDyFc
32. Idaho overpaid road builders millions for shoddy work. State says it won't happen anymore – 2021 – ***Idaho Capital Sun:*** https://bit.ly/3w0M7VE
33. Global heating pushes tropical regions towards limits of human livability – 2021 – ***The Guardian:*** https://bit.ly/3qriN7K
34. Where Do People Fit into a Global Hazard Model? – 2021 – ***AGU Eos***: https://bit.ly/3eclNSS
35. Could Idaho ever see Texas-sized power problems? – 2021 – ***KTVB:*** https://bit.ly/3bvmzY7
36. Where to Restore Burned Forests? (in Farsi) – 2021 – ***Iran International***: https://bit.ly/3at9Jcw
37. Scientists Say Disasters Are Teaming Up During Time Of Climate Change – 2020 – ***npr***: https://n.pr/2RWG6Hq
38. Heat and Drought Team Up More Frequently, With Disastrous Results – 2020 – ***The New York Times***: https://nyti.ms/2Es6t54

39. 2020 Wildfire Season Could Be Taste of Future – 2020 – ***Northern Rockies News Service***: https://bit.ly/2J27HpX
40. California Wildfires of 2020 (in Farsi) – 2020 – ***Iran International***: https://bit.ly/3nwVf0B
41. Wildfires of Western US, 2020 (in Farsi) – 2020 – ***Iran International***: https://bit.ly/2ODdvJu
42. Wildfires in Iran (in Farsi) – 2020 – ***Khabaronline***: https://www.khabaronline.ir/news/1412377
43. We Know Wildfires Are Dangerous. But What About Smoke? New Study Does A Deep Dive – 2019 – ***Boise State Public Radio | npr***: https://bit.ly/2WMWITH
44. Health Survey: Where There's Smoke, There's Confusion – 2019 – ***Public News Service***: pnsne.ws/32BGSwq

NEWS/MEDIA COVERAGE OF PUBLICATIONS:

1. Modaresi Rad et al. 2023 (Nature Sustainability) – 61 news outlets including CBS News, PBS, Scientific American, msn, Daily Beast.
2. Modaresi Rad et al. 2023 (Science Advances) – 125 news outlets including PBS, Fox News and AP.
3. Alizadeh et al. 2023 – 48 news outlets and 1 blog, including SF Gate and Foreign Affairs.
4. Alizadeh et al. 2022 – 81 news outlets and 10 blogs, including The Hill, U.S. news and pbs.
5. Nouri et al. 2021 – 33 news outlets, including BBC News and the Guardian.
6. Alizadeh et al. 2021 – 121 news outlets and 6 blogs, including NBC News, The Washington Post, and E&E news.
7. Alizadeh et al. 2020 – 70 news outlets and 8 blogs, including: The New York Times, NPR, Carbon Brief, Yahoo news, msn, CBS News, The Guardian, Forbes.
8. Khorshidi et al. 2020 – 48 news outlets and 2 blogs, including: The National Interest, The Conversation.
9. Mallakpour et al. 2019 – 15 news outlets and 4 blogs, including: Business Insider, Russia Today, msn, Los Angeles Times, The Herald Sun, and Newsweek.
10. Fowler et al. 2019 – 1 news outlet and 1 blog, inlcuding: Boise State Public Radio and News.
11. Raei et al. 2018 – 1 news outlet: nature Middle East.
12. Alborzi et al. 2018 – 47 news outlets, including: physics world.
13. Sadegh et al. 2018 – 2 blogs: AGU Eos, Boise State News.
14. Ashraf et al. 2018 – 1 blog: Skeptical Science.
15. Sadegh et al. 2017 – 1 blog: Wikipedia.
16. Mazdiyasni et al. 2017 – 119 news outlets and 11 blogs, including: npr, msn, VOA, MailOnline, the guardian, National Geographic, abc News, Business Insider, ALJAZEERA, Chicago Tribune, Yahoo News, FOX News, Thomson Reuters Foundation, and The New York Times.

COURSES:

CE-284: Computational Methods in Civil Engineering

CE-330: Fluid Mechanics

CE-436/536: Hydraulics

CE-332: Hydrologic and Hydraulic Systems

CE 497/597: Special Topics: Hydroclimate Data Analysis

OTHER HONORS AND AWARDS:

- Travel Award, 12th International Precipitation Conference, Irvine, CA, 2019.
- Young Scholar's Conference Scholarship, Brown University, Providence, RI, 2016.
- SCRiM's Summer School Scholarship, Penn State University, State College, PA, 2015.
- California Drought Conference Scholarship, AGU Chapman Conference, Irvine, CA, 2015.

CURRENT PROFESSIONAL MEMBERSHIPS:

- American Geophysical Union – Member

PREVIOUS PROFESSIONAL MEMBERSHIPS:

- American Society of Civil Engineers – Member
- International Environmental Modeling & Software Society – Member
- Association for Fire Ecology – Member
- Idaho Academy of Science and Engineering – Executive Officer – 2018-2019
- American Water Resources Association – Member – 2017-2018
- European Geosciences Union – Member – 2013-2014

SERVICE ACTIVITIES (NON-EXHAUSTIVE):

- Panel Reviewer: Prediction of and Resilience against Extreme Events, NSF.
- Panel Reviewer: Innovations at the Nexus of Food, Energy and Water Systems, NSF.
- Panel Reviewer: Applied Research: Water Resources, NASA
- Panel Reviewer: Early Career Award, NASA
- Panel Reviewer: Canada Foundation for Innovation
- Panelist: The Sawtooth National Recreational Area at 50: Our Legacy and Future Challenges, Virtual, May 24, 2022
- Scientific Committee Member: 15th Symposium on Advances in Sciences and Technology (Commission III), Mashhad, Iran.
- Ad hoc Reviewer: Various NSF Programs.
- Ad hoc Reviewer: New Frontiers in Research Funds – Exploration, Canada.
- Workshop presenter: Multivariate Modeling of Hydroclimate Processes: Copulas and Multi-Hazard Analysis, 2nd International Conference on Conservation of Natural Resources and Environment (virtual), June 8, 2021.
- Session Chair: Remote Sensing: Monitoring, Prediction, and Hazard Mitigation of Hydroclimatic Extreme Events, American Geophysical Union Fall meeting, December 13-17, 2021.
- Convener: Climate Change and the Coronavirus: Promoting Emerging Leaders Through Crucial Conversations, American Geophysical Union Fall meeting, December 1-17, 2020.
- Symposium Technical Co-Chair: A Changing Climate: From Wildfires and Droughts to Floods, Idaho Academy of Sciences and Engineering, April 20-21, 2018.
- Executive Officer: Idaho Academy of Science and Engineering, 2018-2019.
- Workshop presenter: Multivariate Modelling of Hydroclimate Processes: Copulas and Multi-Hazard Analysis, University of Oulu, Finland, October, 22-24, 2019.

- Workshop presenter: Hands-on workshop on Extreme Value Analysis, 12th International Precipitation Conference, Irvine, CA, June 18, 2019.
- Convener: Food, Energy, Water Nexus, American Geophysical Union Fall meeting (3 sessions), December 10-14, 2018.
- Chair: Food, Energy, Water Nexus, American Geophysical Union Fall meeting (3 sessions), December 10-14, 2018.
- Workshop organizer and presenter: Multivariate Modeling in Hydrology, Climatology, and Geosciences: Copulas, Multihazard Analysis, and Probabilistic Prediction, AGU 2018, Washington D.C., December 10-14, 2018.
- Convener: Water and Society: Modeling the Food-Energy-Water Nexus for Sustainable Resource Management (2 sessions), December 11-15, 2017.
- Chair: Water and Society: Modeling the Food-Energy-Water Nexus for Sustainable Resource Management (2 sessions), December 11-15, 2017.
- Convener: Food, Energy, and Water Nexus: Synergies and Tradeoffs, American Geophysical Union Fall meeting (3 sessions), December 12-16, 2016.
- Chair: Food, Energy, and Water Nexus: Synergies and Tradeoffs, American Geophysical Union Fall meeting (3 sessions), December 12-16, 2016.
- Faculty Advisor for Sustainable Solutions Club, Boise State University, 2021-2022.
- Various departmental committees, including search committee, graduate committee and award committee.
- Ad hoc Reviewer for more than 30 journals.

PROFESSIONAL DEVELOPMENT ACTIVITIES:

1. White House Campus and Community-Scale Climate Change Solutions, White House Office of Science and Technology, March 8-9, 2023.
2. The Role of Engineering in Addressing Climate Change, NSF Engineering Research Visioning Alliance, December, 2021.
3. Wildfire and the Biosphere Innovation Lab, NSF-funded Virtual Workshop, May, 2021.
4. Flexible Teaching for Student Success Tier 1 Institute, Center for Teaching and Learning, Boise State University, June-July 2020.
5. Aligning Stakeholders and Structures to Enable Risk Taking (ASSERT) Cohort 4, January-May, 2020.
6. Using Alternative Grading Methods to Enhance the Quality of Feedback and Support Student Learning? Center for Teaching and Learning, Boise State University, October 2019.
7. Introduction to Service-Learning in the Curriculum, Center for Teaching and Learning, Boise State University, September 2019.
8. Mobile Learning Summer Institute, 2018, Center for Teaching and Learning, Boise State University, May 2018.
9. Summer Course Design Institute 1.0, 2017, Center for Teaching and Learning, Boise State University, May 2017.
10. Third annual summer school on “Sustainable climate risk management”, Pennsylvania State University, August 2015.

11. Short Course on "Copulas for hydrology and climate" coordinated and administered by the International Commission for Statistical Hydrology of the International Association for Hydrological Sciences (IAHS), University of California, Irvine, July-August, 2014

THESIS COMMITTEE

1. Abigail Axness, (Ongoing 2021; Advisor: Dr. Pierce)
2. Melisa Hancock, (Graduated; December, 2021; Advisor: Dr. Chittoori)
3. Luise Winsolw, (Graduated; December 2021; Advisor: Dr. Roche)
4. Jenn McAtee, (Ongoing 2020; Advisor: Dr. Chittoori)
5. Md Asif Rahman, (Graduated; December 2020; Advisor: Dr. Lu)
6. Mahmudul Hasan, (Graduated; July 2019; Advisor: Dr. Khanal)
7. Aidin Jafari Golrokh, (Graduated; May 2019; Advisor: Dr. Lu)
8. Thomas Robins, (Graduated; May 2019; Advisor: Dr. Chittoori)
9. Majed Saud, (Graduated; May 2018; Advisor: Dr. Khanal)
10. Amit Gajurel, (Graduated; December 2018; Advisor: Dr. Chittoori)

SCIENTIFIC & EDUCATIONAL SOFTWARE

1. MvCAT: Multivariate Copula Analysis Toolbox
   URL: https://coen.boisestate.edu/hydroclimate/mvdat/
2. MhAST: Multihazard Analysis and Scenario Toolbox
   URL: http://amir.eng.uci.edu/MhAST.php
3. NCRRT: Nonstationary Conceptual Rainfall Runoff Toolbox
   URL: https://coen.boisestate.edu/hydroclimate/ncrrt/

CONFERENCE PRESENTATIONS AND INVITED TALKS (NON-EXHAUSTIVE)

1. Sadegh, M., 2025, Inference of Wildfire Causes from Their Physical, Biological, Social and Management Attributes, *Santa Clara County Fire Safe Council, virtual*.
2. **Sadegh, M.,** Short, K., 2025, Interdisciplinary understanding and prediction of wildfires, *Northwest Fire Science Consortium, virtual*.
3. **Sadegh, M.,** Rad, A.M. and Abatzoglou, J.T., 2024. Trends, patterns, and social vulnerability landscape of exposure to wildfires in the US. *AGU24 (Invited)*.
4. **Sadegh, M.,** Seydi, ST., Abatzoglou, J.T., AghaKouchak, A., Pourmohamad, Y., Mishra, A., 2024, Predictive Understanding of Links between Vegetation and Soil Burn Severities Using Physics-informed Machine Learning, *AGU24*.
5. Alizadeh, M.R., Adamowski, J.F., **Sadegh, M.,** AghaKouchak, A., Madani, K. and Qadir, M., Coupled Human-Water Modeling to Enhance Policy Development in Pakistan's Rechna Doab Watershed. *AGU24*.
6. Pourmohamad, Y., Abatzoglou, J.T. and **Sadegh, M.,** 2024. Machine Learning to Predict Daily Wildfire Ignition Probability across the Western US. *AGU24*.
7. Seydi, ST, **Sadegh, M.,** 2024, Deep Learning Framework for Daily Burned Area Mapping Using MODIS Satellite Imagery, *AGU24*.
8. **Sadegh, M.,** Pourmohamad, Y., 2024, Model, understand, and visualize drivers of historical wildfire occurrences to predict and mitigate future ignitions, *4th Southwest Fire Ecology Conference, Santa Fe, NM, (Invited).*
9. **Sadegh, M.,** 2024, Social vulnerability of the people exposed to wildfires in US West Coast states, *Equity and Environmental Justice in Wildland Fire, Northwest and Northern Rockies Fire Science Consortiums, virtual (Invited).*
10. **Sadegh, M.,** 2024, The Evolving Nature of Western Wildfires and Their Societal Implications, Redmond Lecture (Invited), *MtnClim2024, Tahoe City, CA.*

11. **Sadegh, M.,** 2024, An era of climate extremes: Trends and impacts, *ICCH Fall Climate and Health Lecture Series (Invited)*.
12. **Sadegh, M.,** 2024, Elevation-dependent intensification of fire danger and upslope advance of fires in the western United States, *Lehigh University, Bethlehem, PA*.
13. **Sadegh, M.,** 2024, Climate Change and the Grid, *ResiliEx 2.0, Pacific Northwest National Lab, Seattle, WA, report: http://www.pnnl.gov/main/publications/external/technical_reports/PNNL-37255.pdf.*
14. **Sadegh, M.,** Pierce, J., Rauscher, K., Radin, A., Sims, E., Wicks, S., Flint, H., 2024, Healthy Idaho Project, *Boise State Beyond Boundaries (April).*
15. **Sadegh, M.,** Abatzoglou, J.T., 2024, Machine Learning approach to forecast human-caused wildfires at actionable scales across the western US, *Bureau of Indian Affairs Wildfire Prevention Monthly Regional Conference Call (April).*
16. **Sadegh, M.**, 2024, The Nexus of Climate-Wildfire-Humans, *Boise State Discovery Walk (April)*.
17. Abatzoglou, J.T., **Sadegh, M.,** Kolden, C., 2024, Increasing exposure of humans to wildfires in the western US, *2024 Association of American Geographers Annual Meeting, Honolulu, HI*.
18. Mbuvha, R., Nikraftar, Z., **Sadegh, M.,** Landman, W., 2023, Forecasting the Unpredictable: Evaluating Seasonal forecast Models in Capturing Extreme Events – *Fall Meeting 2023*. AGU.
19. Love, C.A., AghaKouchak, A., **Sadegh, M.**, 2023, Multivariate Statistical Methods for Varying Scenarios of Compound and Cascading Hazards – *Fall Meeting 2023*. AGU
20. Abatzoglou, J.T., Kolden, C., Jones, M.W., Cullen, A., Hsu, A., **Sadegh, M.,** 2023, Drivers of Recent Extreme Regional-to-Continental Fire Seasons – *Fall Meeting 2023*. AGU
21. **Sadegh, M.**, Modaresi Rad, A., Abatzoglou, J.T., Kreitler, J., Alizadeh, M.R., AghaKouchak, A., Hudyman, N., Nauslar, N., 2023, Human and infrastructure exposure to large wildfires in the United States – *Fall Meeting 2023*. AGU.
22. Pourmohamad, Y., Abatzoglou, J.T., Belval, E., Short, K., Fleishman, E., Prestemon, J., **Sadegh, M.**, 2023, Prediction of Wildfire Causes From Their Physical, Biological, and Social Attributes – *Fall Meeting 2023*. AGU.
23. **Sadegh, M.,** 2023 (October, 23), Physical, Social, and Biological Attributes for Improved Understanding and Prediction of Wildfires: FPA FOD-Attributes Dataset – *PNW DEWS Drought and Climate Outlook Webinar*, Virtual.
24. **Sadegh, M.,** 2023 (October, 18), Trends, patterns, and social vulnerability landscape of exposure to wildfires in the US – *USGS Western Geographical Science Center Science Seminar*, Boise, ID and virtual.
25. **Sadegh, M.,** 2023 (September, 19), An era of climate extremes: Trends, impacts and adaptation – *St Luke's Health System LEARN Sack Lunch Series*, Boise, ID
26. **Sadegh, M.,** 2023 (June, 12), Elevation-dependent intensification of fire danger and upslope advance of fires in the western United States – *HydroCafe,* Australia Bureau of Meteorology (virtual).
27. **Sadegh, M.,** 2023 (June, 8), An era of climate extremes: Trends, impacts and adaptation – *Sustainability Summit,* Boise School District, Boise, ID.
28. Sheen, C., Spero, H., Modaresi Rad, A., Sadegh, M., 2023, A Step toward Resolving Spatiotemporal Distribution of Suspended Sediment Concentration using Remote Sensing – *Higher Education Research Council Research Showcase,* Boise State University.
29. **Sadegh, M.,** 2023 (January, 26), Trends, Patterns, and Social Vulnerability of Exposure to Wildfires in the US – *PhD in Computing Seminar Series, Boise State University*.
30. Pourmohamad, Y., Abatzoglou, J., Short, K., Fleishman, E., Belval, E., **Sadegh, M.,** 2022, FPA-FOD-Plus Dataset: Physical, Social, and Biological Attributes for Improved Understanding and Prediction of Wildfire Ignitions and Size – *Fall Meeting 2022*. AGU.
31. Alizadeh, M.R., Abatzoglou, J., Adamowski, J.F., Rad, A.M., AghaKouchak, A., Pausata, F.S., **Sadegh, M.,** 2022, Elevational trends of fire danger in the western United States – *Fall Meeting 2022*. AGU.

32. **Sadegh, M**., Abatzoglou, J., Butler, I., Rad, A.M. and Haghighi, A.T., 2022, Increase in Fire Intensity with Elevation Gain – *Fall Meeting 2022*. AGU.
33. Ahmadi, A., Daccache, A., **Sadegh, M.,** Snyder, R.L., 2022, Comparison of Classic Time Series Forecasting Methods and Deep Learning Models for Reference Evapotranspiration Forecasting – *Fall Meeting 2022*. AGU.
34. ModaresiRad, A., Spero, H., Fallon, K., Kreitler, J., **Sadegh, M.,** 2022, Leveraging Remote Sensing and Deep Learning to Estimate Suspended Sediment Concentration – *Fall Meeting 2022*. AGU.
35. **Sadegh, M.,** 2022 (November, 22), Anthropogenic stressors compound climate impacts on inland lake dynamics: The case of Hamun Lakes – Keynote Speaker, 20th Iranian Geophysical Conference, University of Tehran, Iran.
36. **Sadegh, M.,** 2022 (November, 17), Trends, Patterns, and Social Vulnerability of Exposure to Wildfires in the US – Climate Hazard Center Early Career Seminar Series, University of California, Santa Barbara.
37. **Sadegh, M.,** 2022 (September, 27), Climate Change Impacts on the Western US, University Foundation 100 – Boise State University.
38. **Sadegh, M.,** 2022 (July, 13), Increasing wildfire risks in a warming climate, The 5th International Conference and Exhibition on Urban Fire Service and Safety, Tehran, Iran.
39. **Sadegh, M.,** 2022 (Feb, 2), Increasing wildfire risks in a warming climate, The University of California, Merced.
40. Tootoonchi, F., **Sadegh. M.,** Haerter, J.O., Rati, O., Grabs, T., Teutschbein, C., 2022, Copulas for hydroclimatic analysis: A practice-oriented overview, EGU General Assembly.
41. Karimidastenai, Avellán, T., **Sadegh, M.**, Kløve, B., Torabi Haghighi, A., 2022, Unconventional Water Resources: A golden opportunity to mitigate the mismatch between water supply and water demand, EGU General Assembly.
42. Axness, A., Pierce, J., Glenn, N., **Sadegh, M.,** 2022, Using Historic and Modern Data to Untangle the Role of Climate Versus Management in Driving Large Stand-Replacing Fires in High Elevation Forests in Central Idaho, Joint 118th Annual Cordilleran/72nd Annual Rocky Mountain Section Meeting.
43. Tootoonchi, F., **Sadegh. M.,** Haerter, J.O., Rati, O., Grabs, T., Teutschbein, C., 2022, Copulas for hydroclimatic analysis: A practice-oriented overview, IAHS-AISH Scientific Assembly 2022.
44. Alizadeh. M.R., Abatzoglou, J., Adamowski, J., **Sadegh, M.,** 2021, Increasing global vulnerability to heatwaves, AGU Fall Meeting, New Orleans, LA.
45. Srivastava, A.K., Grotjahn, R., Ullrich, P.A., **Sadegh, M.,** 2021, Pooling data improves multimodel IDF estimates over median-based IDF estimates: Analysis over the Susquehanna and Florida, AGU Fall Meeting, New Orleans, LA.
46. **Sadegh, M**., Alizadeh, M.R., Abatzoglou, J., Luce, C.H., Adamowski, J., 2021, Warming enabled upslope advance in western US forest fires, AGU Fall Meeting, New Orleans, LA.
47. **Sadegh, M.**, 2021, Climate change and wildfires in the West, National Society of Professional Engineers, Virtual.
48. **Sadegh, M.**, 2021, Resolving spatiotemporal distribution of suspended sediment concentration over the Columbia and Snake rivers using remote sensing, U.S. Bureau of Reclamation, Science & Technology Program, Virtual.
49. Chowdhury, M.S., **Sadegh, M.,** Mishra, D., 2021, Climate change impacts on flexible pavement performance, International Conference on. Transportation Geotechnics, Virtual.
50. Rupp, D., Abatzoglou, J.T., O'Neil, L, **Sadegh, M.**, 2021, Extreme fire weather and the historical context of the 2020 Labor Day fires, Invited Talk, Annual Meeting of the Ecological Society of America, Hybrid – Long Beach, CA.

51. Alizadeh, M.R., Adamowski, J.F., **Sadegh, M.,** AghaKouchak, A., 2020, Century-Scale Assessment of Compound Dry-Hot Extremes across Space and Time, Poster Presentation, AGU Fall Meeting, San Francisco, CA.
52. Modaresi Rad, A., **Sadegh, M.,** 2020, Diagnostic assessment of climatic and anthropogenic drivers of drying of Hamun lake, Poster Presentation, AGU Fall Meeting, San Francisco, CA.
53. AghaKouchak, A., **Sadegh, M.,** 2020, Nexus of Food, Energy, and Water (NeFEW): A Data Analysis Toolbox, Oral Presentation, AGU Fall Meeting, San Francisco, CA.
54. **Sadegh, M.,** Fowler, M., 2020, Human response to and perception of wildfire smoke (invited talk), Rocky Mountain Regional Wildfire Smoke Symposium, Boise, ID.
55. Fowler, M., **Sadegh, M.,** 2020, Is smoke a hazard? Rocky Mountain Regional Wildfire Smoke Symposium, Boise, ID.
56. McLaughlin, B., Hudyma, N., Hamilton, B., Chittoori, B., **Sadegh, M.,** Miller, S., 2021, WIP: Halting Attrition in Civil Engineering Programs Through Lower-Division Engagement Course Implementation, 2021 ASEE Virtual Annual Conference.
57. Bayas, L., Giacumo, L., Early, C., Peterson, K., Pearson, J., Farid, A., McLaughlin, B., Plumlee, D., **Sadegh, M.**, Vacha-Haase, T, 2021, Lifting an LI, FG, and/or UR, support program off the ground during COVID-19: Successes and lessons learned, 2021 ASEE Virtual Annual Conference.
58. ModaresiRad, A., **Sadegh, M.,** 2021, A Novel Approach Towards Automating And Improving Accuracy of Inland Water Body Mapping, 101st Annual Meeting of Amercian Meteorological Society, New Orleans, LA.
59. **Sadegh, M.** 2020, Statistical Methods in Climate and Hydrology, Sharif University of Technology, Iran (Virtual).
60. Alizadeh, M.R., Adamowski, J., **Sadegh, M.** 2020, Century-Scale Assessment of Compound Dry-Hot Extremes across Space and Time, 5th CIGR International Conference, Québec City, Canada.
61. Fowler, M., **Sadegh, M.**, 2020, Human Perception of and Response to Wildfire Smoke (EGU2020-21099), EGU, Vienna, Austria.
62. Tootoonchi, F., Teutschbein, C., **Sadegh, M.** 2020, Copula-based multivariate methods in hydroclimatic applications: avoiding common misconceptions and pitfalls (EGU2020-1115), EGU, Vienna, Austria.
63. **Sadegh, M.,** Khorshidi, M.S., Dennison, P.E., Nikoo, MR, AghaKouchak, A., Luce, C. 2019, Increasing Concurrence of Wildfire Drivers Doubles Megafire Critical Danger Days in Southern California, Oral Presentation, AGU Fall Meeting, San Francisco, CA.
64. Mazdiyasni, O., **Sadegh, M.**, Chang, F., AghaKouchak, A. 2019, Heat wave Intensity Duration Frequency Curve: A Multivariate Approach for Hazard and Attribution Analysis, Poster Presentation, AGU Fall Meeting, San Francisco, CA.
65. Modaresi Rad, A., Kreitler, J., **Sadegh, M.** 2019, Impacts of meteorological and anthropogenic droughts on drying of Hamun Lake on the Iran-Afghanistan border, Poster Presentation, AGU Fall Meeting, San Francisco, CA.
66. Hart, M., Farid, A., **Sadegh, M.** 2019, Combined Approach to Destroying Legacy AFFF and Concentrated Waste Streams of PFAS, Poster Presentation, AGU Fall Meeting, San Francisco, CA.
67. Mallakpour, I., AghaKouchak, A., **Sadegh, M.**, Alborzi, A. 2019, Changes to the Exposure of California's Levee-Protected Critical Infrastructure to Flooding Hazard in a Warming Climate, Poster Presentation, AGU Fall Meeting, San Francisco, CA.

68. Farid, A., Sadegh, M., Hart, M. 2019, Understanding Components to Establish Framework for Convergent Approach to Wildfire Mitigation, Oral Presentation, 8th International Fire Ecology and Management Congress, Tucson, AZ.
69. **Sadegh, M.,** Khorshidi, M.S., Dennison, P.E., Nikoo, MR, AghaKouchak, A., Luce, C. 2019, Increasing Concurrence of Wildfire Drivers Doubles Megafire Critical Danger Days in Southern California, Invited Talk, 8th International Fire Ecology and Management Congress, Tucson, AZ.
70. **Sadegh, M.** 2019, Flood Frequency Analysis and Engineering Design in a Changing Climate, University of Oulu, Finland.
71. Gajurel, A., Chittoori, B., Mukherjee, P.S., **Sadegh, M.**, 2019, Machine Learning Methods to Map Stabilizer Effectiveness based on Common Soil Properties, Poster Presentation, TRB Annual Meeting, Washington DC.
72. **Sadegh, M.,** and Alizadeh, MR. 2019, Spatiotemporal Analysis of Compound Hot and Dry Years Across the United States, Oral presentation, 12th International Precipitation Conference, Irvine, CA.
73. Modaresi Rad, A., **Sadegh, M.,** Khalili, D. 2019, On the suitability of clustering techniques to classify meteorological drought, Poster presentation, 12th International Precipitation Conference, Irvine, CA.
74. Mallakpour, I., Sadeghi, M., Mosaffa, H., **Sadegh, M.,** AghaKouchak, A. 2019, Analysis of changes in precipitation characteristics over the contiguous USA in recent decades, Poster presentation, 12th International Precipitation Conference, Irvine, CA.
75. Modaresi Rad, A., Khalili, D., and **Sadegh, M.** 2019, On the application of data mining self-organizing map (SOM) in meteorological drought clustering, Poster presentation, 2019 CUAHSI Hydroinformatics Conferene, Provo, UT.
76. Fowler, M., and **Sadegh, M.** 2019, Human response to wildfire smoke, Oral presentation, 2019 Smoke Management Meeting, Seattle, WA.
77. **Sadegh, M.** 2019, Human Response to Wildfire Smoke: Challenges, Unknowns, and Effective Warning System, Invited talk, University of Montana.
78. **Sadegh, M.,** Raei, E., Nikoo, M.R., Mazdiyasni, O. and AghaKoucahk, A., 2018, GHWR, a multi-method global heatwave and warm-spell record and toolbox, Poster presentation, AGU Fall Meeting, Washington, D.C.
79. Mallakpour, I., AghaKouchak, A., **Sadegh, M.** and Alborzi, A., 2018, Translating plausible changes in flood hazards to potential impacts on the reliability of water infrastructure systems in the future, Oral presentation, AGU Fall Meeting, Washington, D.C.
80. Ajami, H. and **Sadegh M.,** 2018, Quantifying Uncertainty of Semi-distributed Hydrologic Model Simulations for Catchment Scale Applications, Poster presentation, AGU Fall Meeting, Washington, D.C.
81. Ragno, E., AghaKouchak, A., Cheng, L. and **Sadegh, M.,** 2018, Towards Process-based Nonstationary Extreme Value Analysis, Poster presentation, AGU Fall Meeting, Washington, D.C.
82. **Sadegh, M.,** Shojaeezadeh, S.A., Nikoo, M.R., McNamara, J. and AghaKouchak, A., 2018, A New Approach to Model Suspended Sediment Load: Stochastic Prediction and Uncertainty Estimation, Oral presentation, International Congress on Environmental Modeling and Software, Fort Collins, Colorado.

83. Pierce, J. and **Sadegh, M.,** 2018, Will Clean Air Fade Away? Wildfires and Other Air Quality Impacts in the West, Oral presentation, Smoke Management in the Northwest Meeting, Boise, ID.
84. Fowler, M. and **Sadegh, M.,** 2018. Human Response to Wildfire Smoke, Oral Presentation, 2018 Wildfire Interagency After Action Review Meeting, Boise, ID.
85. **Sadegh, M.,** Moftakhari, H., AghaKouchak, A. 2017. Multi-hazard Assessment and Scenario Toolbox (MhAST): A framework for analyzing compounding effects of multiple hazards, Oral presentation, AGU Fall Meeting, New Orleans, LA.
86. AghaKouchak, A., **Sadegh, M.,** Mallakpour, I. 2017. A Data Analysis Toolbox for Modeling the Global Food-Energy-Water Nexus, Invited talk, AGU Fall Meeting, New Orleans, LA.
87. Rahnamai Naeini, M., Hsu, K.L., **Sadegh, M.,** Sorooshian, S., AghaKouchak, A., Yang, T. 2017. Developing a Shuffled Complex-Self Adaptive Hybrid Evolution (SC-SAHEL) Framework for Water Resources Management and Water-Energy System Optimization, Oral presentation, AGU Fall Meeting, New Orleans, LA.
88. Shakeri Majd, M., Moftakhari, H., AghaKouchak, A., **Sadegh, M.,** Mallakpour, I., Vahedifard, F. 2017. Quantifying Changes in Los Angeles River Breakout Triggered by Sea Level Rise Using a Hydrodynamic Model, Poster presentation, AGU Fall Meeting, New Orleans, LA.
89. Ragno E., **Sadegh, M.,** Chen, L., AghaKouchak, A., 2017. A Generalized Framework for Non–Stationary Extreme Value Analysis, Poster presentation, AGU Fall Meeting, New Orleans, LA.
90. **Sadegh, M.,** Ragno, E., and AghaKouchak, A., 2016. MvDAT: Multivariate Dependence Analysis Toolbox, Poster presentation, AGU Fall Meeting, San Francisco, CA.
91. **Sadegh, M.,** and Vrugt, J.A., 2015. How much data is really required for rainfall-runoff model calibration? A summary metric view, Poster presentation, AGU fall meeting, San Francisco, CA.
92. Rahnamay Naeini, M., Vrugt, J.A., **Sadegh, M.,** and Gomes, G., 2015. Scaling of flow duration curves across the contiguous United States, Poster presentation, AGU fall meeting, San Francisco, CA.
93. **Sadegh, M.,** and J.A. Vrugt, J.A., 2014. Detection of watershed non-stationarity from process-based model evaluation using approximate Bayesian computation, Poster presentation, AGU fall meeting, San Francisco, CA.
94. **Sadegh, M.** and Vrugt, J.A. 2014. Diagnostic model evaluation using approximate Bayesian analysis, Computational Methods in Water Resources, Oral presentation, Stuttgart, Germany.
95. Vrugt, J.A. and **Sadegh, M.** 2014. A diagnostic approach to model evaluation: Approximate Bayesian computation, SIAM conference on uncertainty quantification, Oral presentation, Savannah, GA.
96. **Sadegh, M.,** and Vrugt, J.A., 2013. Approximate Bayesian computation using Markov chain Monte Carlo simulation: Theory, concepts, and applications, Oral presentation, AGU fall meeting, San Francisco, CA.
97. Vrugt, J.A., and **Sadegh, M.,** 2013. Approximate Bayesian computation for diagnostic model calibration and evaluation, AGU fall meeting, Oral presentation, San Francisco, CA.
98. **Sadegh, M.**, and Vrugt, J.A., 2012. Reconciling formal and informal statistical approaches: Approximate Bayesian computing and GLUE, Oral presentation, AGU fall meeting, San Francisco, CA.

99. **Sadegh, M.,** and Vrugt, J.A., 2011. The search for hydrologic signatures: The effect of data transformations on Bayesian model calibration, Poster presentation, AGU fall meeting, San Francisco, CA.
100. **Sadegh, M.**, Mahjouri, N. and Kerachian, R., 2010. Developing a Fuzzy game theoretic model for optimal inter-basin water allocation, Proceedings of EWRI's 3rd developing nations conference: India 2010 at IIT-M.
101. **Sadegh, M.** and Kerachian R., 2010. Fuzzy cooperative game solution concepts to a water resource allocation problem, Proceedings of EWRI's 3rd developing nations conference: India 2010 at IIT-M.
102. **Sadegh, M.,** Mahjouri, N. and Kerachian, R. 2009. Water allocation management in an inter-basin water transfer project using Shapley value, Proceedings of the first national conference on engineering and management of infrastructure, University of Tehran, Iran. (in Farsi)

SUMMARY OF JOURNAL PUBLICATIONS

Journal Name	2023 Impact Factor	Publisher	# of Papers
Nature	50.5	Nature	1
Nature Reviews Earth & Environment	49.7	Nature	1
Nature Sustainability	25.7	Nature	2
Reviews of Geophysics	25.2	AGU	1
Nature Communications	14.7	Nature	1
Annual Reviews of Earth and Planetary Sciences	11.3	Annual Reviews	1
Science Advances	11.7	AAAS	3
Journal of Allergy and Clinical Immunology	11.4	AAAAI	1
Water Research	11.4	Elsevier	1
Proceedings of the National Academy of Sciences	9.4	NAS	2
Earth System Science Data	11.2	Copernicus	1
Journal of Cleaner Production	9.7	Elsevier	3
Science of the Total Environment	8.2	Elsevier	3
Sustainable Cities and Society	10.5	Elsevier	1
IEEE Transactions on Geoscience and Remote Sensing	7.5	IEEE	1
Earth's Future	7.3	AGU	5
Scientific Data	5.8	Nature	2
Information Sciences	8.1	Elsevier	1
Process Safety and Environmental Protection	6.9	Elsevier	1
Weather and Climate Extremes	6.1	Elsevier	2
WIRES: Water	6.8	Wiley	1
Geoderma	5.6	Elsevier	1
Environmental Research Letters	5.8	IOP Science	3
Computers and Electronics in Agriculture	7.7	Elsevier	2
Journal of Hydrology	5.9	Elsevier	6
Hydrology and Earth System Sciences	5.7	Copernicus	1
Catena	5.4	Elsevier	1
Water Resources Research	4.6	AGU	5
Geophysical Research Letters	4.6	AGU	3
Environmental Modeling & Software	4.8	Elsevier	2
Advances in Water Resources	4.0	Elsevier	2
Environmental Science and Pollution Research	-	Springer	2
Climatic Change	4.8	Springer	1
Measurement	5.2	Elsevier	1
Scientific Reports	3.8	Nature	1
Transportation Geotechnics	4.9	Elsevier	1
Journal of Hydrometeorology	3.1	AMS	1
Water Resources Management	2.1	Springer	5
Progress in Physical Geography	3.0	SAGE	1
Philosophical Transactions of the Royal Society A	4.3	Royal Society	1
Journal of Flood Risk Management	3.0	Wiley	1
Hydrological Sciences Journal	2.8	T&F	3
Journal of Applied Meteorology and Climatology	2.6	AMS	1
Sustainability	3.3	mdpi	1
Stoch. Envir. Res. and Risk Assessment	3.9	Springer	1
Hydrological Processes	2.8	Wiley	1

Water	3.0	mdpi	2
Fire	3.0	mdpi	1
Geophysical Journal International	2.8	Oxford Univ. Press	1
Environmental Monitoring and Assessment	2.9	Springer	3
Natural Hazards	3.3	Springer	1
Earth and Space Science	2.9	AGU	1
Groundwater	2.4	NGWA	1
Urban Water Journal	1.6	T&F	3
Rangeland Ecology & Management	2.4	Elsevier	1
Canadian Journal of Civil Engineering	1.1	Canadian Sci. Pub.	1
PNAS Nexus	2.2	NAS	1
Environmental Research: Health	--	IOP Science	1
Iranian Journal of Irrigation and Drainage	--	Ir. Assoc. Irrig. & Drain.	1
Iranian Journal of Soil and Water Research	--	University of Tehran	1
Education Sciences	2.5	mdpi	1
npj Natural Hazards	--	Nature	1
Eos	--	AGU	1
The Conversation	--	The Conversation	8
Nature Briefing	--	Nature	1
Nature Portfolio Earth and Environment Community	--	Nature	1