Bhavna Arora

List of Publications by Year in descending order

45 papers	1,674 citations	331670 21 h-index	289244 40 g-index
54 all docs	54 docs citations	54 times ranked	1974 citing authors

#	Article	IF	Citations
1	Can machine learning accelerate process understanding and decisionâ€relevant predictions of river water quality?. Hydrological Processes, 2022, 36, .	2.6	26
2	From legacy contamination to watershed systems science: a review of scientific insights and technologies developed through DOE-supported research in water and energy security. Environmental Research Letters, 2022, 17, 043004.	5.2	12
3	Volcanology, Geochemistry, and Petrology Perspectives on Integrated, Coordinated, Open, Networked (ICON) Science. Earth and Space Science, 2022, 9, .	2.6	2
4	Tidal frequencies and quasiperiodic subsurface water level variations dominate redox dynamics in a salt marsh system. Hydrological Processes, 2022, 36, .	2.6	8
5	Hot Spots and Hot Moments in the Critical Zone: Identification of and Incorporation into Reactive Transport Models. , 2022, , 9-47.		7
6	Stable and radioactive carbon isotope partitioning in soils and saturated systems: a reactive transport modeling benchmark study. Computational Geosciences, 2021, 25, 1393-1403.	2.4	5
7	Surrogate optimization of deep neural networks for groundwater predictions. Journal of Global Optimization, 2021, 81, 203-231.	1.8	40
8	Microbially mediated kinetic sulfur isotope fractionation: reactive transport modeling benchmark. Computational Geosciences, 2021, 25, 1379-1391.	2.4	5
9	Modeling the Impact of Riparian Hollows on River Corridor Nitrogen Exports. Frontiers in Water, 2021, 3, .	2.3	15
10	Toward a Generalizable Framework of Disturbance Ecology Through Crowdsourced Science. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	34
11	Temporal Variability of Water Quality Parameters at the Elkhorn Slough Estuary using Wavelets. , 2021, , .		1
12	Hysteresis Patterns of Watershed Nitrogen Retention and Loss Over the Past 50Âyears in United States Hydrological Basins. Global Biogeochemical Cycles, 2021, 35, e2020GB006777.	4.9	29
13	The Future of Critical Zone Science: Call for Papers. Eos, 2021, 102, .	0.1	6
14	Influence of Agricultural Managed Aquifer Recharge (AgMAR) and Stratigraphic Heterogeneities on Nitrate Reduction in the Deep Subsurface. Water Resources Research, 2021, 57, e2020WR029148.	4.2	17
15	Statistical characterization of environmental hot spots and hot moments and applications in groundwater hydrology. Hydrology and Earth System Sciences, 2021, 25, 4127-4146.	4.9	6
16	Adding our leaves: A communityâ€wide perspective on research directions in ecohydrology. Hydrological Processes, 2020, 34, 1665-1673.	2.6	3
17	Differential C-Q Analysis: A New Approach to Inferring Lateral Transport and Hydrologic Transients Within Multiple Reaches of a Mountainous Headwater Catchment. Frontiers in Water, 2020, 2, .	2.3	24
18	Impact of Input Feature Selection on Groundwater Level Prediction From a Multi-Layer Perceptron Neural Network. Frontiers in Water, 2020, 2, .	2.3	23

#	Article	IF	Citations
19	FUZZY RULE-BASED SYSTEMS FOR MULTIVARIATE AND UNIVARIATE HYDROLOGICAL FORECASTING. , 2020, , .		0
20	Depthâ€•and Timeâ€Resolved Distributions of Snowmeltâ€Driven Hillslope Subsurface Flow and Transport and Their Contributions to Surface Waters. Water Resources Research, 2019, 55, 9474-9499.	4.2	25
21	Understanding and Predicting Vadose Zone Processes. Reviews in Mineralogy and Geochemistry, 2019, 85, 303-328.	4.8	31
22	Modeling Climate Change Impacts on an Arctic Polygonal Tundra: 2. Changes in CO₂ and CH₄ Exchange Depend on Rates of Permafrost Thaw as Affected by Changes in Vegetation and Drainage. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1323-1341.	3.0	15
23	Multi-scale Model of Reactive Transport in Fractured Media: Diffusion Limitations on Rates. Transport in Porous Media, 2019, 128, 701-721.	2.6	32
24	10. Understanding and Predicting Vadose Zone Processes. , 2019, , 303-328.		3
25	Evaluating temporal controls on greenhouse gas (GHG) fluxes in an Arctic tundra environment: An entropy-based approach. Science of the Total Environment, 2019, 649, 284-299.	8.0	23
26	Hot Spots and Hot Moments of Nitrogen in a Riparian Corridor. Water Resources Research, 2018, 54, 205-222.	4.2	99
27	Next generation modeling of microbial souring â€“ Parameterization through genomic information. International Biodeterioration and Biodegradation, 2018, 126, 189-203.	3.9	21
28	Comparison of Electrostatic and Nonâ€Electrostatic Models for U(<scp>VI</scp>) Sorption on Aquifer Sediments. Ground Water, 2018, 56, 73-86.	1.3	15
29	Geochemical Exports to River From the Intrameander Hyporheic Zone Under Transient Hydrologic Conditions: East River Mountainous Watershed, Colorado. Water Resources Research, 2018, 54, 8456-8477.	4.2	66
30	Attenuating Sulfidogenesis in a Soured Continuous Flow Column System With Perchlorate Treatment. Frontiers in Microbiology, 2018, 9, 1575.	3.5	32
31	Water Table Dynamics and Biogeochemical Cycling in a Shallow, Variably-Saturated Floodplain. Environmental Science & Technology, 2017, 51, 3307-3317.	10.0	100
32	Impact of Intra-meander Hyporheic Flow on Nitrogen Cycling. Procedia Earth and Planetary Science, 2017, 17, 404-407.	0.6	26
33	On Modeling CO2 Dynamics in a Flood Plain Aquifer. Procedia Earth and Planetary Science, 2017, 17, 408-411.	0.6	3
34	Influence of Spatial Heterogeneity and Hydrological Perturbations on Redox Dynamics: A Column Study. Procedia Earth and Planetary Science, 2017, 17, 869-872.	0.6	5
35	Mathematical Modelling of Arctic Polygonal Tundra with Ecosys: 2. Microtopography Determines How CO₂ and CH₄ Exchange Responds to Changes in Temperature and Precipitation. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 3174-3187.	3.0	41
36	Identifying geochemical hot moments and their controls on a contaminated river floodplain system using wavelet and entropy approaches. Environmental Modelling and Software, 2016, 85, 27-41.	4.5	35

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37	Influence of hydrological, biogeochemical and temperature transients on subsurface carbon fluxes in a flood plain environment. Biogeochemistry, 2016, 127, 367-396.	3.5	76
38	Benchmarking Reactive Transport Codes for Subsurface Environmental Problems. , 2016, , 299-316.		2
39	An integrated Markov chain Monte Carlo algorithm for upscaling hydrological and geochemical parameters from column to field scale. Science of the Total Environment, 2015, 512-513, 428-443.	8.0	11
40	A reactive transport benchmark on heavy metal cycling in lake sediments. Computational Geosciences, 2015, 19, 613-633.	2.4	30
41	Benchmark problems for reactive transport modeling of the generation and attenuation of acid rock drainage. Computational Geosciences, 2015, 19, 599-611.	2.4	26
42	Reactive transport codes for subsurface environmental simulation. Computational Geosciences, 2015, 19, 445-478.	2.4	566
43	Temporal dynamics of biogeochemical processes at the Norman Landfill site. Water Resources Research, 2013, 49, 6909-6926.	4.2	21
44	Uncertainty in dual permeability model parameters for structured soils. Water Resources Research, 2012, 48, WR010500.	4.2	35
45	Inverse estimation of parameters for multidomain flow models in soil columns with different macropore densities. Water Resources Research, 2011, 47, 2010WR009451.	4.2	68