

Bhavna Arora

List of Publications by Year in descending order

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Version: 2024-02-01

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	Reactive transport codes for subsurface environmental simulation. <i>Computational Geosciences</i> , 2015, 19, 445-478.	2.4	566
2	Water Table Dynamics and Biogeochemical Cycling in a Shallow, Variably-Saturated Floodplain. <i>Environmental Science & Technology</i> , 2017, 51, 3307-3317.	10.0	100
3	Hot Spots and Hot Moments of Nitrogen in a Riparian Corridor. <i>Water Resources Research</i> , 2018, 54, 205-222.	4.2	99
4	Influence of hydrological, biogeochemical and temperature transients on subsurface carbon fluxes in a flood plain environment. <i>Biogeochemistry</i> , 2016, 127, 367-396.	3.5	76
5	Inverse estimation of parameters for multidomain flow models in soil columns with different macropore densities. <i>Water Resources Research</i> , 2011, 47, 2010WR009451.	4.2	68
6	Geochemical Exports to River From the Intrameander Hyporheic Zone Under Transient Hydrologic Conditions: East River Mountainous Watershed, Colorado. <i>Water Resources Research</i> , 2018, 54, 8456-8477.	4.2	66
7	Mathematical Modelling of Arctic Polygonal Tundra with <i>Ecosys</i> : 2. Microtopography Determines How CO ₂ and CH ₄ Exchange Responds to Changes in Temperature and Precipitation. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 3174-3187.	3.0	41
8	Surrogate optimization of deep neural networks for groundwater predictions. <i>Journal of Global Optimization</i> , 2021, 81, 203-231.	1.8	40
9	Uncertainty in dual permeability model parameters for structured soils. <i>Water Resources Research</i> , 2012, 48, WR010500.	4.2	35
10	Identifying geochemical hot moments and their controls on a contaminated river floodplain system using wavelet and entropy approaches. <i>Environmental Modelling and Software</i> , 2016, 85, 27-41.	4.5	35
11	Toward a Generalizable Framework of Disturbance Ecology Through Crowdsourced Science. <i>Frontiers in Ecology and Evolution</i> , 2021, 9, .	2.2	34
12	Attenuating Sulfidogenesis in a Soured Continuous Flow Column System With Perchlorate Treatment. <i>Frontiers in Microbiology</i> , 2018, 9, 1575.	3.5	32
13	Multi-scale Model of Reactive Transport in Fractured Media: Diffusion Limitations on Rates. <i>Transport in Porous Media</i> , 2019, 128, 701-721.	2.6	32
14	Understanding and Predicting Vadose Zone Processes. <i>Reviews in Mineralogy and Geochemistry</i> , 2019, 85, 303-328.	4.8	31
15	A reactive transport benchmark on heavy metal cycling in lake sediments. <i>Computational Geosciences</i> , 2015, 19, 613-633.	2.4	30
16	Hysteresis Patterns of Watershed Nitrogen Retention and Loss Over the Past 50 Years in United States Hydrological Basins. <i>Global Biogeochemical Cycles</i> , 2021, 35, e2020GB006777.	4.9	29
17	Benchmark problems for reactive transport modeling of the generation and attenuation of acid rock drainage. <i>Computational Geosciences</i> , 2015, 19, 599-611.	2.4	26
18	Impact of Intra-meander Hyporheic Flow on Nitrogen Cycling. <i>Procedia Earth and Planetary Science</i> , 2017, 17, 404-407.	0.6	26

#	ARTICLE	IF	CITATIONS
19	Can machine learning accelerate process understanding and decision-relevant predictions of river water quality?. Hydrological Processes, 2022, 36, .	2.6	26
20	Depth- and Time-Resolved Distributions of Snowmelt-Driven Hillslope Subsurface Flow and Transport and Their Contributions to Surface Waters. Water Resources Research, 2019, 55, 9474-9499.	4.2	25
21	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
22	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
23	Impact of Input Feature Selection on Groundwater Level Prediction From a Multi-Layer Perceptron Neural Network. Frontiers in Water, 2020, 2, .	2.3	23
24	Temporal dynamics of biogeochemical processes at the Norman Landfill site. Water Resources Research, 2013, 49, 6909-6926.	4.2	21
25	Next generation modeling of microbial souring - Parameterization through genomic information. International Biodeterioration and Biodegradation, 2018, 126, 189-203.	3.9	21
26	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
27	Comparison of Electrostatic and Non-Electrostatic Models for U(VI) Sorption on Aquifer Sediments. Ground Water, 2018, 56, 73-86.	1.3	15
28	Modeling Climate Change Impacts on an Arctic Polygonal Tundra: 2. Changes in CO ₂ and CH ₄ 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
29	Modeling the Impact of Riparian Hollows on River Corridor Nitrogen Exports. Frontiers in Water, 2021, 3, .	2.3	15
30	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
31	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
32	Tidal frequencies and quasiperiodic subsurface water level variations dominate redox dynamics in a salt marsh system. Hydrological Processes, 2022, 36, .	2.6	8
33	Hot Spots and Hot Moments in the Critical Zone: Identification of and Incorporation into Reactive Transport Models. , 2022, , 9-47.		7
34	The Future of Critical Zone Science: Call for Papers. Eos, 2021, 102, .	0.1	6
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	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
38	Microbially mediated kinetic sulfur isotope fractionation: reactive transport modeling benchmark. Computational Geosciences, 2021, 25, 1379-1391.	2.4	5
39	On Modeling CO2 Dynamics in a Flood Plain Aquifer. Procedia Earth and Planetary Science, 2017, 17, 408-411.	0.6	3
40	10. Understanding and Predicting Vadose Zone Processes. , 2019, , 303-328.		3
41	Adding our leaves: A community-wide perspective on research directions in ecohydrology. Hydrological Processes, 2020, 34, 1665-1673.	2.6	3
42	Benchmarking Reactive Transport Codes for Subsurface Environmental Problems. , 2016, , 299-316.		2
43	Volcanology, Geochemistry, and Petrology Perspectives on Integrated, Coordinated, Open, Networked (ICON) Science. Earth and Space Science, 2022, 9, .	2.6	2
44	Temporal Variability of Water Quality Parameters at the Elkhorn Slough Estuary using Wavelets. , 2021, , .		1
45	FUZZY RULE-BASED SYSTEMS FOR MULTIVARIATE AND UNIVARIATE HYDROLOGICAL FORECASTING. , 2020, , .		0