

Christine Stumpp

List of Publications by Year in descending order

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95
papers

3,387
citations

172443

29
h-index

168376

53
g-index

99
all docs

99
docs citations

99
times ranked

4224
citing authors

#	ARTICLE	IF	CITATIONS
1	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019, 64, 1141-1158.	2.6	474
2	Biodegradation: Updating the Concepts of Control for Microbial Cleanup in Contaminated Aquifers. <i>Environmental Science & Technology</i> , 2015, 49, 7073-7081.	10.0	211
3	The Demographics of Water: A Review of Water Ages in the Critical Zone. <i>Reviews of Geophysics</i> , 2019, 57, 800-834.	23.0	197
4	Water droplets in oil are microhabitats for microbial life. <i>Science</i> , 2014, 345, 673-676.	12.6	118
5	Analysis of long-term stable isotopic composition in German precipitation. <i>Journal of Hydrology</i> , 2014, 517, 351-361.	5.4	116
6	Inter-laboratory comparison of cryogenic water extraction systems for stable isotope analysis of soil water. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 3619-3637.	4.9	92
7	Tracking water pathways in steep hillslopes by $\delta^{18}\text{O}$ depth profiles of soil water. <i>Journal of Hydrology</i> , 2014, 519, 340-352.	5.4	89
8	Quantification of preferential flow and flow heterogeneities in an unsaturated soil planted with different crops using the environmental isotope $\delta^{18}\text{O}$. <i>Journal of Hydrology</i> , 2010, 394, 407-415.	5.4	81
9	Toward operational methods for the assessment of intrinsic groundwater vulnerability: A review. <i>Critical Reviews in Environmental Science and Technology</i> , 2016, 46, 827-884.	12.8	72
10	Estimating groundwater recharge from water isotope ($\delta^2\text{H}$, $\delta^{18}\text{O}$) depth profiles in the Densu River basin, Ghana. <i>Hydrological Sciences Journal</i> , 2010, 55, 1405-1416.	2.6	67
11	Effects of Land Cover and Fertilization Method on Water Flow and Solute Transport in Five Lysimeters: A Long-Term Study Using Stable Water Isotopes. <i>Vadose Zone Journal</i> , 2012, 11, .	2.2	67
12	Potential impacts of geothermal energy use and storage of heat on groundwater quality, biodiversity, and ecosystem processes. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	2.7	66
13	Environmental isotope ($\delta^{18}\text{O}$) and hydrological data to assess water flow in unsaturated soils planted with different crops: Case study lysimeter station –Wagna– (Austria). <i>Journal of Hydrology</i> , 2009, 369, 198-208.	5.4	64
14	Snow and frost: implications for spatiotemporal infiltration patterns – a review. <i>Hydrological Processes</i> , 2016, 30, 1230-1250.	2.6	60
15	Inverse Estimation of Soil Hydraulic and Transport Parameters of Layered Soils from Water Stable Isotope and Lysimeter Data. <i>Vadose Zone Journal</i> , 2018, 17, 1-19.	2.2	57
16	Spatial and temporal dynamics of water flow and solute transport in a heterogeneous glacial till: The application of high-resolution profiles of $\delta^{18}\text{O}$ and $\delta^2\text{H}$ in pore waters. <i>Journal of Hydrology</i> , 2012, 438-439, 203-214.	5.4	56
17	Long-term data set analysis of stable isotopic composition in German rivers. <i>Journal of Hydrology</i> , 2017, 552, 718-731.	5.4	55
18	Risk of groundwater contamination widely underestimated because of fast flow into aquifers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	53

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19	Differentiated spring behavior under changing hydrological conditions in an alpine karst aquifer. <i>Journal of Hydrology</i> , 2018, 556, 572-584.	5.4	44
20	Effects of the 2017 drought on isotopic and geochemical gradients in the Adige catchment, Italy. <i>Science of the Total Environment</i> , 2018, 645, 924-936.	8.0	42
21	Identifying groundwater degradation sources in a Mediterranean coastal area experiencing significant multi-origin stresses. <i>Science of the Total Environment</i> , 2020, 746, 141203.	8.0	42
22	Modelling of water flow through typical Bavarian soils: 2. Environmental deuterium transport. <i>Hydrological Sciences Journal</i> , 2006, 51, 298-313.	2.6	40
23	Application of the environmental isotope $\delta^{18}O$ to study water flow in unsaturated soils planted with different crops: Case study of a weighable lysimeter from the research field in Neuherberg, Germany. <i>Journal of Hydrology</i> , 2009, 368, 68-78.	5.4	40
24	Tracing freshwater nitrate sources in pre-alpine groundwater catchments using environmental tracers. <i>Journal of Hydrology</i> , 2015, 524, 753-767.	5.4	38
25	Sorption properties and behaviour at laboratory scale of selected pharmaceuticals using batch experiments. <i>Journal of Contaminant Hydrology</i> , 2019, 225, 103500.	3.3	35
26	Evaluation of pedotransfer functions for estimating soil hydraulic properties of prevalent soils in a catchment of the Bavarian Alps. <i>European Journal of Forest Research</i> , 2009, 128, 609-620.	2.5	34
27	Architects of the underworld: bioturbation by groundwater invertebrates influences aquifer hydraulic properties. <i>Aquatic Sciences</i> , 2019, 81, 1.	1.5	32
28	Quantification of the heterogeneity of the unsaturated zone based on environmental deuterium observed in lysimeter experiments. <i>Hydrological Sciences Journal</i> , 2007, 52, 748-762.	2.6	30
29	The Impact of Water Table Drawdown and Drying on Subterranean Aquatic Fauna in In-Vitro Experiments. <i>PLoS ONE</i> , 2013, 8, e78502.	2.5	30
30	Transport and Bacterial Interactions of Three Bacterial Strains in Saturated Column Experiments. <i>Environmental Science & Technology</i> , 2011, 45, 2116-2123.	10.0	29
31	Evaluation of aquifer recharge and vulnerability in an alluvial lowland using environmental tracers. <i>Journal of Hydrology</i> , 2015, 529, 1657-1668.	5.4	29
32	Source identification of nitrate contamination in the urban aquifer of Mashhad, Iran. <i>Journal of Hydrology: Regional Studies</i> , 2019, 25, 100618.	2.4	29
33	A comparative modeling study of a dual tracer experiment in a large lysimeter under atmospheric conditions. <i>Journal of Hydrology</i> , 2009, 375, 566-577.	5.4	28
34	Correcting Laser-Based Water Stable Isotope Readings Biased by Carrier Gas Changes. <i>Environmental Science & Technology</i> , 2016, 50, 7074-7081.	10.0	28
35	Temporal changes in groundwater quality of the Saloum coastal aquifer. <i>Journal of Hydrology: Regional Studies</i> , 2017, 9, 163-182.	2.4	27
36	Correcting for Biogenic Gas Matrix Effects on Laser-Based Pore Water Vapor Stable Isotope Measurements. <i>Vadose Zone Journal</i> , 2018, 17, 1-10.	2.2	27

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37	Advantages and challenges of using soil water isotopes to assess groundwater recharge dominated by snowmelt at a field study located in Canada. <i>Hydrological Sciences Journal</i> , 2018, 63, 679-695.	2.6	24
38	Effects of reclaimed water discharge in the Maneadero coastal aquifer, Baja California, Mexico. <i>Applied Geochemistry</i> , 2018, 92, 121-139.	3.0	24
39	The discovery of Lake Hephaestus, the youngest athallassohaline deep-sea formation on Earth. <i>Scientific Reports</i> , 2019, 9, 1679.	3.3	24
40	Assessing groundwater recharge and transpiration in a humid northern region dominated by snowmelt using vadose-zone depth profiles. <i>Hydrogeology Journal</i> , 2020, 28, 2315-2329.	2.1	24
41	Application of isotopic tracers as a tool for understanding hydrodynamic behavior of the highly exploited Diass aquifer system (Senegal). <i>Journal of Hydrology</i> , 2014, 511, 443-459.	5.4	23
42	Transport and Water Age Dynamics in Soils: A Comparative Study of Spatially Integrated and Spatially Explicit Models. <i>Water Resources Research</i> , 2020, 56, no.	4.2	23
43	A decision tree tool supporting the assessment of groundwater vulnerability. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	2.7	22
44	Response and recovery of a pristine groundwater ecosystem impacted by toluene contamination – A meso-scale indoor aquifer experiment. <i>Journal of Contaminant Hydrology</i> , 2017, 207, 17-30.	3.3	22
45	Time variability and uncertainty in the fraction of young water in a small headwater catchment. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 4333-4347.	4.9	22
46	Compound-Specific Stable Isotope Fractionation of Pesticides and Pharmaceuticals in a Mesoscale Aquifer Model. <i>Environmental Science & Technology</i> , 2016, 50, 5729-5739.	10.0	21
47	Response of Transport Parameters and Sediment Microbiota to Water Table Fluctuations in Laboratory Columns. <i>Vadose Zone Journal</i> , 2015, 14, 1-12.	2.2	20
48	Temporal trends in $\delta^{18}\text{O}$ composition of precipitation in Germany: insights from time series modelling and trend analysis. <i>Hydrological Processes</i> , 2015, 29, 2668-2680.	2.6	20
49	Modelling of water flow through typical Bavarian soils: 1. Estimation of hydraulic characteristics of the unsaturated zone. <i>Hydrological Sciences Journal</i> , 2006, 51, 285-297.	2.6	19
50	Hydrological dynamics of water sources in a Mediterranean lagoon. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 4825-4837.	4.9	18
51	Groundwater depth and topography correlate with vegetation structure of an upland peat swamp, Budderoo Plateau, NSW, Australia. <i>Ecohydrology</i> , 2014, 7, 1392-1402.	2.4	18
52	Diffusive mass exchange of non-reactive substances in dual-porosity porous systems - column experiments under saturated conditions. <i>Hydrological Processes</i> , 2016, 30, 914-926.	2.6	18
53	Stable Isotope Approaches in Vadose Zone Research. <i>Vadose Zone Journal</i> , 2018, 17, 180096.	2.2	18
54	Overview of tritium records from precipitation and surface waters in Germany. <i>Hydrological Processes</i> , 2020, 34, 1489-1493.	2.6	18

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55	Disentangling model complexity in green roof hydrological analysis: A Bayesian perspective. <i>Water Research</i> , 2020, 182, 115973.	11.3	18
56	Reduction of vegetation-accessible water storage capacity after deforestation affects catchment travel time distributions and increases young water fractions in a headwater catchment. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 4887-4915.	4.9	18
57	Spatiotemporal Variations in Snow and Soil Frost – A Review of Measurement Techniques. <i>Hydrology</i> , 2016, 3, 28.	3.0	17
58	Spatial and Temporal Variability of Snow Isotopic Composition on Mt. Zugspitze, Bavarian Alps, Germany. <i>Journal of Hydrology and Hydromechanics</i> , 2019, 67, 49-58.	2.0	17
59	The coupled socio-ecohydrological evolution of river systems: Towards an integrative perspective of river systems in the 21st century. <i>Science of the Total Environment</i> , 2021, 801, 149619.	8.0	17
60	Handling model complexity with parsimony: Numerical analysis of the nitrogen turnover in a controlled aquifer model setup. <i>Journal of Hydrology</i> , 2020, 584, 124681.	5.4	16
61	Spatiotemporal variation of stable isotopic composition in precipitation: Postcondensational effects in a humid area. <i>Hydrological Processes</i> , 2017, 31, 3146-3159.	2.6	15
62	Development of a hydrogeological conceptual wetland model in the data-scarce north-eastern region of Kilombero Valley, Tanzania. <i>Hydrogeology Journal</i> , 2018, 26, 267-284.	2.1	15
63	Constraining a Flow Model with Field Measurements to Assess Water Transit Time Through a Vadose Zone. <i>Ground Water</i> , 2021, 59, 417-427.	1.3	15
64	Balancing exploitation and exploration: A novel hybrid global-local optimization strategy for hydrological model calibration. <i>Environmental Modelling and Software</i> , 2022, 150, 105341.	4.5	15
65	Groundwater amphipods alter aquifer sediment structure. <i>Hydrological Processes</i> , 2017, 31, 3452-3454.	2.6	14
66	Column Experiments on Sorption Coefficients and Biodegradation Rates of Selected Pharmaceuticals in Three Aquifer Sediments. <i>Water (Switzerland)</i> , 2020, 12, 14.	2.7	14
67	Changes in Water Flow and Solute Transport Pathways During Long-Term Column Experiments. <i>Vadose Zone Journal</i> , 2013, 12, 1-13.	2.2	13
68	Changes in water table level influence solute transport in uniform porous media. <i>Hydrological Processes</i> , 2015, 29, 875-888.	2.6	13
69	Partitioning evapotranspiration using water stable isotopes and information from lysimeter experiments. <i>Hydrological Sciences Journal</i> , 2022, 67, 646-661.	2.6	13
70	Representativeness of 2D models to simulate 3D unstable variable density flow in porous media. <i>Journal of Hydrology</i> , 2016, 542, 541-551.	5.4	12
71	Different depths, different fauna: habitat influences on the distribution of groundwater invertebrates. <i>Hydrobiologia</i> , 2017, 797, 145-157.	2.0	12
72	An operational methodology for determining relevant DRASTIC factors and their relative weights in the assessment of aquifer vulnerability to contamination. <i>Environmental Earth Sciences</i> , 2021, 80, 1.	2.7	12

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73	Geologic factors controlling groundwater chemistry in the coastal aquifer system of Douala/Cameroon: implication for groundwater system functioning. <i>Environmental Earth Sciences</i> , 2018, 77, 1.	2.7	11
74	Dynamics of pathogens and fecal indicators during riverbank filtration in times of high and low river levels. <i>Water Research</i> , 2022, 209, 117961.	11.3	11
75	Sorption and biodegradation parameters of selected pharmaceuticals in laboratory column experiments. <i>Journal of Contaminant Hydrology</i> , 2021, 236, 103738.	3.3	10
76	Using vadose-zone water stable isotope profiles for assessing groundwater recharge under different climatic conditions. <i>Hydrological Sciences Journal</i> , 2021, 66, 1597-1609.	2.6	10
77	High Resolution Monitoring Above and Below the Groundwater Table Uncovers Small-Scale Hydrochemical Gradients. <i>Environmental Science & Technology</i> , 2017, 51, 13806-13815.	10.0	9
78	Evaluation of the hydrological flow paths in a gravel bed filter modeling a horizontal subsurface flow wetland by using a multi-tracer experiment. <i>Science of the Total Environment</i> , 2018, 621, 265-272.	8.0	9
79	Groundwater recharge over the past 100 years: Regional spatiotemporal assessment and climate change impact over the Saguenay–St-Jean region, Canada. <i>Hydrological Processes</i> , 2022, 36, .	2.6	9
80	Regionalizing soil properties in a catchment of the Bavarian Alps. <i>European Journal of Forest Research</i> , 2009, 128, 597-608.	2.5	8
81	Quantifying the impact of immobile water regions on the fate of nitroaromatic compounds in dual-porosity media. <i>Journal of Contaminant Hydrology</i> , 2016, 191, 44-53.	3.3	8
82	Short-Term Effects on Agricultural Soils Irrigated with Reclaimed Water in Baja California, México. <i>Bulletin of Environmental Contamination and Toxicology</i> , 2019, 102, 829-835.	2.7	8
83	Multi-tracer assessment of seasonal water source changes in coastal water systems along the southeastern coast of Ivory Coast (West Africa). <i>Hydrological Sciences Journal</i> , 2018, 63, 2124-2145.	2.6	6
84	Influence of equilibration time, soil texture, and saturation on the accuracy of porewater water isotope assays using the direct H ₂ O(liquid)–H ₂ O(vapor) equilibration method. <i>Journal of Hydrology</i> , 2022, 607, 127560.	5.4	6
85	A chemical and microbial characterization of selected mud volcanoes in Trinidad reveals pathogens introduced by surface water and rain water. <i>Science of the Total Environment</i> , 2020, 707, 136087.	8.0	5
86	Application of the D-A-(C) index as a simple tool for microbial-ecological characterization and assessment of groundwater ecosystems—A case study of the Mur River Valley, Austria. <i>Osterreichische Wasser- Und Abfallwirtschaft</i> , 2021, 73, 455-467.	0.3	4
87	Green Roofs for domestic wastewater treatment: Experimental and numerical analysis of nitrogen turnover. <i>Journal of Hydrology</i> , 2021, 603, 127132.	5.4	4
88	The Vadose Zone—A Semi-Aquatic Ecosystem. , 2022, , 331-338.		4
89	Spatial and seasonal variability of groundwater hydrochemistry in the Senegal North Littoral aquifer using multivariate approach. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	2.7	3
90	A robust optimization technique for analysis of multi-tracer experiments. <i>Journal of Contaminant Hydrology</i> , 2019, 224, 103481.	3.3	3

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91	Rosalia: an experimental research site to study hydrological processes in a forest catchment. <i>Earth System Science Data</i> , 2021, 13, 4019-4034.	9.9	3
92	Modeling seasonal soil moisture dynamics in gley soils in relation to groundwater table oscillations in eastern Croatia. <i>Catena</i> , 2022, 211, 105987.	5.0	3
93	Analytical transport modelling of metabolites formed in dual-porosity media. <i>Environmental Science and Pollution Research</i> , 2017, 24, 4447-4456.	5.3	2
94	Spatial and Annual Variation in Microbial Abundance, Community Composition, and Diversity Associated With Alpine Surface Snow. <i>Frontiers in Microbiology</i> , 2021, 12, 781904.	3.5	1
95	Influence of sample preparation procedures on water stable isotopes in plant organs using the water vapour equilibrium method. <i>Ecohydrology</i> , 2022, 15, .	2.4	1