

Christian Birkel

List of Publications by Year in descending order

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Version: 2024-02-01

73
papers

2,718
citations

186265

28
h-index

189892

50
g-index

75
all docs

75
docs citations

75
times ranked

2409
citing authors

#	ARTICLE	IF	CITATIONS
1	Improving regional flood risk assessment using flood frequency and dendrogeomorphic analyses in mountain catchments impacted by tropical cyclones. <i>Geomorphology</i> , 2022, 396, 108000.	2.6	45
2	Continuous in situ measurements of water stable isotopes in soils, tree trunk and root xylem: Field approval. <i>Rapid Communications in Mass Spectrometry</i> , 2022, 36, e9232.	1.5	22
3	<scp>SEAS5</scp> skilfully predicts late w<scp>etâ€season</scp> precipitation in Central American Dry Corridor excelling in Costa Rica and Nicaragua. <i>International Journal of Climatology</i> , 2022, 42, 4953-4971.	3.5	3
4	Evaluating tropical drought risk by combining open access gridded vulnerability and hazard data products. <i>Science of the Total Environment</i> , 2022, 822, 153493.	8.0	7
5	Tracerâ€aided modelling reveals quick runoff generation and young streamflow ages in a tropical rainforest catchment. <i>Hydrological Processes</i> , 2022, 36, .	2.6	7
6	Remote sensing-aided rainfallâ€runoff modeling in the tropics of Costa Rica. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 975-999.	4.9	12
7	Assessing land use influences on isotopic variability and stream water ages in urbanising rural catchments. <i>Isotopes in Environmental and Health Studies</i> , 2022, 58, 277-300.	1.0	4
8	Characterizing solute budgets of a tropical Andean páramo ecosystem. <i>Science of the Total Environment</i> , 2022, 835, 155560.	8.0	5
9	End member and Bayesian mixing models consistently indicate nearâ€surface flowpath dominance in a pristine humid tropical rainforest. <i>Hydrological Processes</i> , 2021, 35, e14153.	2.6	16
10	A preliminary isotopeâ€based evapotranspiration partitioning approach for tropical Costa Rica. <i>Ecohydrology</i> , 2021, 14, e2297.	2.4	7
11	Effects of streamflow isotope sampling strategies on the calibration of a tracerâ€aided rainfallâ€runoff model. <i>Hydrological Processes</i> , 2021, 35, e14223.	2.6	13
12	Structural changes to forests during regeneration affect water flux partitioning, water ages and hydrological connectivity: Insights from tracer-aided ecohydrological modelling. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 4861-4886.	4.9	12
13	Highâ€frequency multiâ€solute calibration using an in situ<scp>UV</scp>â€visible sensor. <i>Hydrological Processes</i> , 2021, 35, e14357.	2.6	8
14	Hydrological Processes Special Issue â€œHydrological processes across climatic and geomorphological gradients of Latin Americaâ€: <i>Hydrological Processes</i> , 2020, 34, 156-158.	2.6	0
15	Net landscape carbon balance of a tropical savanna: Relative importance of fire and aquatic export in offsetting terrestrial production. <i>Global Change Biology</i> , 2020, 26, 5899-5913.	9.5	17
16	Modelling nonâ€stationary water ages in a tropical rainforest: A preliminary spatially distributed assessment. <i>Hydrological Processes</i> , 2020, 34, 4776-4793.	2.6	12
17	Tracing Water Sources and Fluxes in a Dynamic Tropical Environment: From Observations to Modeling. <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	17
18	From mountains to cities: a novel isotope hydrological assessment of a tropical water distribution system. <i>Isotopes in Environmental and Health Studies</i> , 2020, 56, 606-623.	1.0	10

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19	A concerted research effort to advance the hydrological understanding of tropical páramos. <i>Hydrological Processes</i> , 2020, 34, 4609-4627.	2.6	32
20	Quantifying the relative importance of stock level, river temperature and discharge on the abundance of juvenile Atlantic salmon (<i>Salmo salar</i>). <i>Ecohydrology</i> , 2020, 13, e2231.	2.4	9
21	Headwaters drive streamflow and lowland tracer export in a large-scale humid tropical catchment. <i>Hydrological Processes</i> , 2020, 34, 3824-3841.	2.6	13
22	Tracer-Aided Modeling in the Low-Relief, Wet-Dry Tropics Suggests Water Ages and DOC Export Are Driven by Seasonal Wetlands and Deep Groundwater. <i>Water Resources Research</i> , 2020, 56, e2019WR026175.	4.2	18
23	Dendrogeomorphic reconstruction of floods in a dynamic tropical river. <i>Geomorphology</i> , 2020, 359, 107133.	2.6	42
24	Seasonal Shift From Biogenic to Geogenic Fluvial Carbon Caused by Changing Water Sources in the Wet-Dry Tropics. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020, 125, e2019JG005384.	3.0	15
25	Deciphering key processes controlling rainfall isotopic variability during extreme tropical cyclones. <i>Nature Communications</i> , 2019, 10, 4321.	12.8	52
26	Exploring extreme rainfall impacts on flow and turbidity dynamics in a steep, pristine and tropical volcanic catchment. <i>Catena</i> , 2019, 182, 104118.	5.0	23
27	DOC Transport and Export in a Dynamic Tropical Catchment. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2019, 124, 1665-1679.	3.0	15
28	Moisture transport and seasonal variations in the stable isotopic composition of rainfall in Central American and Andean páramo during El Niño conditions (2015–2016). <i>Hydrological Processes</i> , 2019, 33, 1802-1817.	2.6	48
29	Technical note: Uncertainty in multi-source partitioning using large tracer data sets. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 5059-5068.	4.9	6
30	Spatial and temporal patterns, trends and teleconnection of cumulative rainfall deficits across Central America. <i>International Journal of Climatology</i> , 2019, 39, 1940-1953.	3.5	22
31	Spatially distributed hydro-chemical data with temporally high-resolution is needed to adequately assess the hydrological functioning of headwater catchments. <i>Science of the Total Environment</i> , 2019, 651, 1613-1626.	8.0	33
32	Climate and Water Conflicts Coevolution from Tropical Development and Hydro-Climatic Perspectives: A Case Study of Costa Rica. <i>Journal of the American Water Resources Association</i> , 2018, 54, 451-470.	2.4	20
33	Positive and neutral effects of forest cover on dry-season stream flow in Costa Rica identified from Bayesian regression models with informative prior distributions. <i>Hydrological Processes</i> , 2018, 32, 3604-3614.	2.6	13
34	Insight into the stable isotopic composition of glacial lakes in a tropical alpine ecosystem: Costa Rica. <i>Hydrological Processes</i> , 2018, 32, 3588-3603.	2.6	25
35	Characterization of surface water isotope spatial patterns of Scotland. <i>Journal of Geochemical Exploration</i> , 2018, 194, 71-80.	3.2	20
36	Spatially distributed tracer-aided modelling to explore water and isotope transport, storage and mixing in a pristine, humid tropical catchment. <i>Hydrological Processes</i> , 2018, 32, 3206-3224.	2.6	27

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37	Nonlinear and threshold-dominated runoff generation controls DOC export in a small peat catchment. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2017, 122, 498-513.	3.0	41
38	Using SAS functions and high-resolution isotope data to unravel travel time distributions in headwater catchments. <i>Water Resources Research</i> , 2017, 53, 1864-1878.	4.2	102
39	Tropical precipitation anomalies and $\delta^{18}O$ -excess evolution during El Niño 2014-16. <i>Hydrological Processes</i> , 2017, 31, 956-967.	2.6	44
40	Hydroclimatic and ecohydrological resistance/resilience conditions across tropical biomes of Costa Rica. <i>Ecohydrology</i> , 2017, 10, e1860.	2.4	18
41	An anisotropic and inhomogeneous hidden Markov model for the classification of water quality spatio-temporal series on a national scale: The case of Scotland. <i>Environmetrics</i> , 2017, 28, e2427.	1.4	5
42	Stable isotopes evidence of recycled subduction fluids in the hydrothermal/volcanic activity across Nicaragua and Costa Rica. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 345, 172-183.	2.1	6
43	Using synoptic tracer surveys to assess runoff sources in an Andean headwater catchment in central Chile. <i>Environmental Monitoring and Assessment</i> , 2017, 189, 440.	2.7	23
44	Using high-resolution isotope data and alternative calibration strategies for a tracer-aided runoff model in a nested catchment. <i>Hydrological Processes</i> , 2017, 31, 3962-3978.	2.6	17
45	Conceptual modelling to assess the influence of hydro-climatic variability on runoff processes in data scarce semi-arid Andean catchments. <i>Hydrological Sciences Journal</i> , 2017, 62, 515-532.	2.6	32
46	Temporal and spatial evaluation of satellite-based rainfall estimates across the complex topographical and climatic gradients of Chile. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 1295-1320.	4.9	193
47	Characterizing the age distribution of catchment evaporative losses. <i>Hydrological Processes</i> , 2016, 30, 1308-1312.	2.6	25
48	Linking tracers, water age and conceptual models to identify dominant runoff processes in a sparsely monitored humid tropical catchment. <i>Hydrological Processes</i> , 2016, 30, 4477-4493.	2.6	24
49	Key drivers controlling stable isotope variations in daily precipitation of Costa Rica: Caribbean Sea versus Eastern Pacific Ocean moisture sources. <i>Quaternary Science Reviews</i> , 2016, 131, 250-261.	3.0	68
50	Water sources and mixing in riparian wetlands revealed by tracers and geospatial analysis. <i>Water Resources Research</i> , 2016, 52, 456-470.	4.2	37
51	Hydroclimatic controls on non-stationary stream water ages in humid tropical catchments. <i>Journal of Hydrology</i> , 2016, 542, 231-240.	5.4	19
52	Modelling storage-driven connectivity between landscapes and riverscapes: towards a simple framework for long-term ecohydrological assessment. <i>Hydrological Processes</i> , 2016, 30, 2482-2497.	2.6	21
53	Groundwater recharge mechanisms inferred from isoscapes in a complex tropical mountainous region. <i>Geophysical Research Letters</i> , 2016, 43, 5060-5069.	4.0	66
54	Stream water age distributions controlled by storage dynamics and nonlinear hydrologic connectivity: Modeling with high-resolution isotope data. <i>Water Resources Research</i> , 2015, 51, 7759-7776.	4.2	134

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55	Advancing tracer-aided rainfall-runoff modelling: a review of progress, problems and unrealised potential. <i>Hydrological Processes</i> , 2015, 29, 5227-5240.	2.6	120
56	Spatial aggregation of time-variant stream water ages in urbanizing catchments. <i>Hydrological Processes</i> , 2015, 29, 3038-3050.	2.6	27
57	Observational uncertainties in hypothesis testing: investigating the hydrological functioning of a tropical catchment. <i>Hydrological Processes</i> , 2015, 29, 4863-4879.	2.6	18
58	Conceptual modelling to assess how the interplay of hydrological connectivity, catchment storage and tracer dynamics controls nonstationary water age estimates. <i>Hydrological Processes</i> , 2015, 29, 2956-2969.	2.6	95
59	Modelling landscape controls on dissolved organic carbon sources and fluxes to streams. <i>Biogeochemistry</i> , 2015, 122, 361-374.	3.5	77
60	ASSESSING THE CUMULATIVE IMPACTS OF HYDROPOWER REGULATION ON THE FLOW CHARACTERISTICS OF A LARGE ATLANTIC SALMON RIVER SYSTEM. <i>River Research and Applications</i> , 2014, 30, 456-475.	1.7	20
61	Integrating parsimonious models of hydrological connectivity and soil biogeochemistry to simulate stream DOC dynamics. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 1030-1047.	3.0	35
62	Developing a consistent process-based conceptualization of catchment functioning using measurements of internal state variables. <i>Water Resources Research</i> , 2014, 50, 3481-3501.	4.2	73
63	Storage dynamics in hydrogeological units control hillslope connectivity, runoff generation, and the evolution of catchment transit time distributions. <i>Water Resources Research</i> , 2014, 50, 969-985.	4.2	216
64	Assessing urbanization impacts on catchment transit times. <i>Geophysical Research Letters</i> , 2014, 41, 442-448.	4.0	33
65	Modelling the impacts of land-cover change on streamflow dynamics of a tropical rainforest headwater catchment. <i>Hydrological Sciences Journal</i> , 2012, 57, 1543-1561.	2.6	37
66	High-frequency storm event isotope sampling reveals time-variant transit time distributions and influence of diurnal cycles. <i>Hydrological Processes</i> , 2012, 26, 308-316.	2.6	96
67	Using time domain and geographic source tracers to conceptualize streamflow generation processes in lumped rainfall-runoff models. <i>Water Resources Research</i> , 2011, 47, .	4.2	86
68	Modelling catchment-scale water storage dynamics: reconciling dynamic storage with tracer-inferred passive storage. <i>Hydrological Processes</i> , 2011, 25, 3924-3936.	2.6	125
69	Towards a simple dynamic process conceptualization in rainfall-runoff models using multi-criteria calibration and tracers in temperate, upland catchments. <i>Hydrological Processes</i> , 2010, 24, 260-275.	2.6	60
70	Assessing the value of high-resolution isotope tracer data in the stepwise development of a lumped conceptual rainfall-runoff model. <i>Hydrological Processes</i> , 2010, 24, 2335-2348.	2.6	67
71	Land cover change induced sediment transport behaviour in a large tropical Mexican catchment. <i>Hydrological Sciences Journal</i> , 0, , 1-14.	2.6	3
72	Projected climate change impacts on tropical life zones in Costa Rica. <i>Progress in Physical Geography</i> , 0, , 030913332110470.	3.2	1

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73	Erosión potencial estimada en el río Papaloapan: eficiencia e incertidumbre en las modelaciones. Tecnología Y Ciencias Del Agua, 0, , 01-57.	0.3	0