

Ilja van Meerveld

List of Publications by Year in descending order

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Version: 2024-02-01

108
papers

5,134
citations

109137

35
h-index

95083

68
g-index

156
all docs

156
docs citations

156
times ranked

5165
citing authors

#	ARTICLE	IF	CITATIONS
1	Threshold relations in subsurface stormflow: 2. The fill and spill hypothesis. <i>Water Resources Research</i> , 2006, 42, .	1.7	477
2	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019, 64, 1141-1158.	1.2	474
3	The influence of soil moisture on threshold runoff generation processes in an alpine headwater catchment. <i>Hydrology and Earth System Sciences</i> , 2011, 15, 689-702.	1.9	319
4	On the interrelations between topography, soil depth, soil moisture, transpiration rates and species distribution at the hillslope scale. <i>Advances in Water Resources</i> , 2006, 29, 293-310.	1.7	312
5	Threshold relations in subsurface stormflow: 1. A 147-storm analysis of the Panola hillslope. <i>Water Resources Research</i> , 2006, 42, .	1.7	305
6	The role of lateral pipe flow in hillslope runoff response: an intercomparison of non-linear hillslope response. <i>Journal of Hydrology</i> , 2005, 311, 117-133.	2.3	173
7	Effect of bedrock permeability on subsurface stormflow and the water balance of a trenched hillslope at the Panola Mountain Research Watershed, Georgia, USA. <i>Hydrological Processes</i> , 2007, 21, 750-769.	1.1	153
8	Consistency between hydrological models and field observations: linking processes at the hillslope scale to hydrological responses at the watershed scale. <i>Hydrological Processes</i> , 2009, 23, 311-319.	1.1	128
9	A versatile index to characterize hysteresis between hydrological variables at the runoff event timescale. <i>Hydrological Processes</i> , 2016, 30, 1449-1466.	1.1	105
10	Seasonal changes in runoff generation in a small forested mountain catchment. <i>Hydrological Processes</i> , 2015, 29, 2027-2042.	1.1	95
11	Upper and lower benchmarks in hydrological modelling. <i>Hydrological Processes</i> , 2018, 32, 1120-1125.	1.1	85
12	Hillslope dynamics modeled with increasing complexity. <i>Journal of Hydrology</i> , 2008, 361, 24-40.	2.3	78
13	An Overview of Temporary Stream Hydrology in Canada. <i>Canadian Water Resources Journal</i> , 2012, 37, 279-310.	0.5	75
14	Hydrological response of an Alpine catchment to rainfall and snowmelt events. <i>Journal of Hydrology</i> , 2016, 537, 382-397.	2.3	75
15	Topographic controls on shallow groundwater levels in a steep, prealpine catchment: When are the TWI assumptions valid?. <i>Water Resources Research</i> , 2014, 50, 6067-6080.	1.7	72
16	From hillslope to stream: methods to investigate subsurface connectivity. <i>Wiley Interdisciplinary Reviews: Water</i> , 2015, 2, 177-198.	2.8	72
17	Toward catchment hydro-geochemical theories. <i>Wiley Interdisciplinary Reviews: Water</i> , 2021, 8, e1495.	2.8	65
18	Global transpiration data from sap flow measurements: the SAPFLUXNET database. <i>Earth System Science Data</i> , 2021, 13, 2607-2649.	3.7	65

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19	Virtual Staff Gauges for Crowd-Based Stream Level Observations. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	63
20	Hillslopeâ€“riparianâ€“stream connectivity and flow directions at the Panola Mountain Research Watershed. <i>Hydrological Processes</i> , 2015, 29, 3556-3574.	1.1	62
21	Rebuilding soil hydrological functioning after swidden agriculture in eastern Madagascar. <i>Agriculture, Ecosystems and Environment</i> , 2017, 239, 101-111.	2.5	62
22	Assessment of multi-frequency electromagnetic induction for determining soil moisture patterns at the hillslope scale. <i>Journal of Hydrology</i> , 2009, 368, 56-67.	2.3	59
23	A virtual experiment on the effects of evaporation and intensity smoothing by canopy interception on subsurface stormflow generation. <i>Journal of Hydrology</i> , 2006, 327, 352-364.	2.3	57
24	Effect of raindrop splash and transversal width on soil erosion: Laboratory flume experiments and analysis with the Hairsineâ€“Rose model. <i>Journal of Hydrology</i> , 2010, 395, 117-132.	2.3	56
25	Expansion and contraction of the flowing stream network alter hillslope flowpath lengths and the shape of the travel time distribution. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 4825-4834.	1.9	54
26	Spatial variation in transient water table responses: differences between an upper and lower hillslope zone. <i>Hydrological Processes</i> , 2011, 25, 3866-3877.	1.1	52
27	Spatial variability in the isotopic composition of rainfall in a small headwater catchment and its effect on hydrograph separation. <i>Journal of Hydrology</i> , 2017, 547, 755-769.	2.3	52
28	Double funnelling in a mature coastal British Columbia forest: spatial patterns of stemflow after infiltration. <i>Hydrological Processes</i> , 2016, 30, 4185-4201.	1.1	49
29	Measurement and modeling of rainfall interception by two differently aged secondary forests in upland eastern Madagascar. <i>Journal of Hydrology</i> , 2017, 545, 212-225.	2.3	49
30	Comment to â€œSpatial correlation of soil moisture in small catchments and its relationship to dominant spatial hydrological processes, <i>Journal of Hydrology</i> 286: 113â€“134â€“. <i>Journal of Hydrology</i> , 2005, 303, 307-312.	2.3	44
31	Fillâ€“andâ€“Spill: A Process Description of Runoff Generation at the Scale of the Beholder. <i>Water Resources Research</i> , 2021, 57, e2020WR027514.	1.7	43
32	The Essential Role of the Lagg in Raised Bog Function and Restoration: A Review. <i>Wetlands</i> , 2011, 31, 613-622.	0.7	42
33	Quantification of subsurface hydrologic connectivity in four headwater catchments using graph theory. <i>Science of the Total Environment</i> , 2019, 646, 1265-1280.	3.9	42
34	Reduced raindrop-impact driven soil erosion by infiltration. <i>Journal of Hydrology</i> , 2007, 342, 331-335.	2.3	40
35	Influence of sediment settling velocity on mechanistic soil erosion modeling. <i>Water Resources Research</i> , 2008, 44, .	1.7	37
36	Spatioâ€“temporal variability in contributions to low flows in the high Alpine Poschiavino catchment. <i>Hydrological Processes</i> , 2018, 32, 3938-3953.	1.1	35

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37	Soil physical characteristics of a degraded tropical grassland and a "reforest"™: Implications for runoff generation. <i>Geoderma</i> , 2019, 333, 163-177.	2.3	35
38	Effects of soil and vegetation development on surface hydrological properties of moraines in the Swiss Alps. <i>Catena</i> , 2020, 187, 104353.	2.2	35
39	Information content of stream level class data for hydrological model calibration. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 4895-4905.	1.9	34
40	From Points to Patterns: Using Groundwater Time Series Clustering to Investigate Subsurface Hydrological Connectivity and Runoff Source Area Dynamics. <i>Water Resources Research</i> , 2019, 55, 5784-5806.	1.7	34
41	A Low-Cost, Multi-Sensor System to Monitor Temporary Stream Dynamics in Mountainous Headwater Catchments. <i>Sensors</i> , 2019, 19, 4645.	2.1	34
42	Crowd-Based Observations of Riverine Macroplastic Pollution. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	34
43	Testing the Waters: Mobile Apps for Crowdsourced Streamflow Data. <i>Eos</i> , 2018, 99, .	0.1	34
44	Tracing the Water Sources of Trees and Streams: Isotopic Analysis in a Small Pre-Alpine Catchment. <i>Procedia Environmental Sciences</i> , 2013, 19, 106-112.	1.3	33
45	Is groundwater response timing in a pre-Alpine catchment controlled more by topography or by rainfall?. <i>Hydrological Processes</i> , 2016, 30, 1036-1051.	1.1	33
46	Topographic Controls on Deep Groundwater Contributions to Mountain Headwater Streams and Sensitivity to Available Recharge. <i>Canadian Water Resources Journal</i> , 2012, 37, 349-371.	0.5	32
47	Gypsies in the palace: experimentalist's view on the use of "physics"-based simulation of hillslope hydrological response. <i>Hydrological Processes</i> , 2010, 24, 3878-3893.	1.1	29
48	Transpiration and stomatal conductance in a young secondary tropical montane forest: contrasts between native trees and invasive understory shrubs. <i>Tree Physiology</i> , 2018, 38, 1053-1070.	1.4	29
49	The CrowdWater game: A playful way to improve the accuracy of crowdsourced water level class data. <i>PLoS ONE</i> , 2019, 14, e0222579.	1.1	29
50	Aqua temporaria incognita. <i>Hydrological Processes</i> , 2020, 34, 5704-5711.	1.1	27
51	Groundwater similarity across a watershed derived from time-warped and flow-corrected time series. <i>Water Resources Research</i> , 2017, 53, 3921-3940.	1.7	26
52	The role of experimental work in hydrological sciences " insights from a community survey. <i>Hydrological Sciences Journal</i> , 0, , 1-4.	1.2	25
53	Spatial variability in the isotopic composition of water in small catchments and its effect on hydrograph separation. <i>Wiley Interdisciplinary Reviews: Water</i> , 2019, 6, e1367.	2.8	24
54	Forest regeneration can positively contribute to local hydrological ecosystem services: Implications for forest landscape restoration. <i>Journal of Applied Ecology</i> , 2021, 58, 755-765.	1.9	24

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55	A reference data set of hillslope rainfall-runoff response, Panola Mountain Research Watershed, United States. <i>Water Resources Research</i> , 2008, 44, .	1.7	23
56	Hydrological change modeling: Challenges and opportunities. <i>Hydrological Processes</i> , 2016, 30, 4966-4971.	1.1	21
57	Value of uncertain streamflow observations for hydrological modelling. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5243-5257.	1.9	21
58	Value of Crowdsourced Water Level Class Observations for Hydrological Model Calibration. <i>Water Resources Research</i> , 2020, 56, e2019WR026108.	1.7	21
59	Quality and timing of crowdsourced water level class observations. <i>Hydrological Processes</i> , 2020, 34, 4365-4378.	1.1	21
60	Examining the public health implications of drinking water-related behaviours and perceptions: A face-to-face exploratory survey of residents in eight coastal communities in British Columbia and Nova Scotia. <i>Canadian Geographer / Géographie Canadien</i> , 2015, 59, 111-125.	1.0	19
61	How can we model subsurface stormflow at the catchment scale if we cannot measure it?. <i>Hydrological Processes</i> , 2019, 33, 1378-1385.	1.1	19
62	Accuracy of crowdsourced streamflow and stream level class estimates. <i>Hydrological Sciences Journal</i> , 2020, 65, 823-841.	1.2	19
63	Regional and local patterns in depth to water table, hydrochemistry and peat properties of bogs and their lags in coastal British Columbia. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 3421-3435.	1.9	18
64	Controls on sediment production from an unpaved resource road in a Pacific maritime watershed. <i>Water Resources Research</i> , 2014, 50, 4803-4820.	1.7	18
65	Runoff response and sediment yield of a landslide-affected fire-climax grassland micro-catchment (Leyte, the Philippines) before and after passage of typhoon Haiyan. <i>Journal of Hydrology</i> , 2018, 565, 524-537.	2.3	18
66	Spatial variability in specific discharge and streamwater chemistry during low flows: Results from snapshot sampling campaigns in eleven Swiss catchments. <i>Hydrological Processes</i> , 2019, 33, 2847-2866.	1.1	17
67	When should stream water be sampled to be most informative for event-based, multi-criteria model calibration?. <i>Hydrology Research</i> , 2017, 48, 1566-1584.	1.1	16
68	Key gaps in soil monitoring during forest restoration in Colombia. <i>Restoration Ecology</i> , 2021, 29, e13391.	1.4	16
69	Teaching Research Methods Courses in Human Geography: Critical Reflections. <i>Journal of Geography in Higher Education</i> , 2010, 34, 155-171.	1.4	14
70	Effects of Reforestation of a Degraded <i>Imperata</i> Grassland on Dominant Flow Pathways and Streamflow Responses in Leyte, the Philippines. <i>Water Resources Research</i> , 2019, 55, 4128-4148.	1.7	14
71	Runoff generation in a pre-alpine catchment: A discussion between a tracer and a shallow groundwater hydrologist. <i>Cuadernos De Investigacion Geografica</i> , 2018, 44, 429-452.	0.6	14
72	Do stream water solute concentrations reflect when connectivity occurs in a small, pre-Alpine headwater catchment?. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 3381-3398.	1.9	13

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73	A model-based assessment of the potential use of compound-specific stable isotope analysis in river monitoring of diffuse pesticide pollution. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 4505-4524.	1.9	12
74	Validation and Over-Parameterizationâ€™ Experiences from Hydrological Modeling. <i>Simulation Foundations, Methods and Applications</i> , 2019, , 811-834.	0.8	12
75	The evolving perceptual model of streamflow generation at the Panola Mountain Research Watershed. <i>Hydrological Processes</i> , 2021, 35, e14127.	1.1	12
76	Effect of DEM-smoothing and -aggregation on topographically-based flow directions and catchment boundaries. <i>Journal of Hydrology</i> , 2021, 602, 126717.	2.3	12
77	Typhoon-induced changes in rainfall interception loss from a tropical multi-species â€™reforestâ€™™. <i>Journal of Hydrology</i> , 2019, 568, 658-675.	2.3	11
78	Spatiotemporal variability in hydrochemistry of shallow groundwater in a small preâ€™alpine catchment: The importance of landscape elements. <i>Hydrological Processes</i> , 2019, 33, 2502-2522.	1.1	10
79	Water budget and runoff response of a tropical multispecies â€™reforestâ€™ and effects of typhoon disturbance. <i>Ecohydrology</i> , 2019, 12, e2055.	1.1	10
80	Intermittent and Perennial Streamflow Regime Characteristics in the Okanagan. <i>Canadian Water Resources Journal</i> , 2012, 37, 391-414.	0.5	9
81	ZeroFlow: A PUB (Prediction in Ungauged Basins) Workshop on Temporary Streams Summary of Workshop Discussions and Future Directions. <i>Canadian Water Resources Journal</i> , 2012, 37, 425-431.	0.5	9
82	Incentives for field hydrology and data sharing: collaboration and compensation: reply to â€™A need for incentivizing field hydrology, especially in an era of open dataâ€™. <i>Hydrological Sciences Journal</i> , 2018, 63, 1266-1268.	1.2	8
83	What is the best time to take stream isotope samples for event-based model calibration?. <i>Journal of Hydrology</i> , 2019, 577, 123950.	2.3	8
84	Soil water- and overland flow dynamics in a tropical catchment subject to long-term slash-and-burn agriculture. <i>Journal of Hydrology</i> , 2020, 582, 124287.	2.3	8
85	Key drivers of pyrogenic carbon redistribution during a simulated rainfall event. <i>Biogeosciences</i> , 2021, 18, 1105-1126.	1.3	8
86	Impacts of Rural Water Diversions on Prairie Streamflow. <i>Canadian Water Resources Journal</i> , 2012, 37, 415-424.	0.5	7
87	Open Science: Open Data, Open Models, â€™ and Open Publications?. <i>Water Resources Research</i> , 2021, 57, e2020WR029480.	1.7	7
88	Training citizen scientists through an online game developed for data quality control. <i>Geoscience Communication</i> , 2020, 3, 109-126.	0.5	7
89	Ressi experimental catchment: Ecohydrological research in the Italian <sc>preâ€™Alps</sc>. <i>Hydrological Processes</i> , 2021, 35, e14095.	1.1	6
90	Dung beetles as hydrological engineers: effects of tunnelling on soil infiltration. <i>Ecological Entomology</i> , 2022, 47, 84-94.	1.1	6

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91	Long-Term Changes in Runoff Generation Mechanisms for Two Proglacial Areas in the Swiss Alps I: Overland Flow. <i>Water Resources Research</i> , 2021, 57, e2021WR030221.	1.7	6
92	A multi-scale study of the dominant catchment characteristics impacting low-flow metrics. <i>Hydrological Processes</i> , 2022, 36, .	1.1	6
93	Effects of Spatial Variability in the Groundwater Isotopic Composition on Hydrograph Separation Results for a Pre-Alpine Headwater Catchment. <i>Water Resources Research</i> , 2020, 56, e2019WR026855.	1.7	4
94	Hydrological trends and the evolution of catchment research in the Alptal valley, central Switzerland. <i>Hydrological Processes</i> , 2021, 35, e14113.	1.1	4
95	Laggs can develop and be restored inside a raised bog. <i>Wetlands Ecology and Management</i> , 2018, 26, 635-649.	0.7	3
96	Organic Carbon Stocks in all Pools Following Land Cover Change in the Rainforest of Madagascar. , 2018, , 25-37.		3
97	Effect of Observation Errors on the Timing of the Most Informative Isotope Samples for Event-Based Model Calibration. <i>Hydrology</i> , 2018, 5, 4.	1.3	3
98	How do geomorphic characteristics affect the source of tree water uptake in restored river floodplains?. <i>Ecohydrology</i> , 2022, 15, .	1.1	3
99	Erosion of soils due to rainfall impact – an interpolation method. <i>Ecohydrology</i> , 2012, 5, 575-579.	1.1	2
100	Classification of vegetative lagg types and hydrogeomorphic lagg forms in bogs of coastal British Columbia, Canada. <i>Canadian Geographer / Géographie Canadien</i> , 2016, 60, 123-134.	1.0	2
101	Introduction to Special Issue: Prediction in Ungauged Basins (PUB) Workshop on Temporary Streams. <i>Canadian Water Resources Journal</i> , 2012, 37, 275-278.	0.5	1
102	Celebrating hydrologic science: The science is essential collection. <i>Water Resources Research</i> , 2017, 53, 5204-5208.	1.7	1
103	Representation of Bi-Directional Fluxes Between Groundwater and Surface Water in a Bucket-Type Hydrological Model. <i>Water Resources Research</i> , 2021, 57, e2020WR028835.	1.7	1
104	A vision for Water Resources Research. <i>Water Resources Research</i> , 2017, 53, 4530-4532.	1.7	0
105	Appreciation for Water Resources Research Reviewers. <i>Water Resources Research</i> , 2018, 54, 7114-7137.	1.7	0
106	Why and when it is useful to publish and share inconclusive results and failures: reply to Reporting negative results to stimulate experimental hydrology. <i>Hydrological Sciences Journal</i> , 2018, 63, 1273-1274.	1.2	0
107	Thank You to Our 2019 Reviewers. <i>Water Resources Research</i> , 2020, 56, e2020WR027684.	1.7	0
108	Thank You to Our 2020 Reviewers. <i>Water Resources Research</i> , 2021, 57, e2021WR029938.	1.7	0