

# Hilary K Mcmillan

## List of Publications by Year in descending order

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Version: 2024-02-01

50  
papers

3,600  
citations

147801

31  
h-index

214800

47  
g-index

62  
all docs

62  
docs citations

62  
times ranked

3801  
citing authors

#	ARTICLE	IF	CITATIONS
1	â€œPanta Rheiâ€”Everything Flowsâ€” Change in hydrology and societyâ€”The IAHS Scientific Decade 2013â€“2022. Hydrological Sciences Journal, 2013, 58, 1256-1275.	2.6	569
2	Benchmarking observational uncertainties for hydrology: rainfall, river discharge and water quality. Hydrological Processes, 2012, 26, 4078-4111.	2.6	345
3	Rainfall uncertainty in hydrological modelling: An evaluation of multiplicative error models. Journal of Hydrology, 2011, 400, 83-94.	5.4	195
4	Constraining dynamic TOPMODEL responses for imprecise water table information using fuzzy rule based performance measures. Journal of Hydrology, 2004, 291, 254-277.	5.4	158
5	Impacts of uncertain river flow data on rainfallâ€“runoff model calibration and discharge predictions. Hydrological Processes, 2010, 24, 1270-1284.	2.6	136
6	Uncertainty in hydrological signatures. Hydrology and Earth System Sciences, 2015, 19, 3951-3968.	4.9	127
7	Hydrological field data from a modeller's perspective: Part 1. Diagnostic tests for model structure. Hydrological Processes, 2011, 25, 511-522.	2.6	121
8	Reduced complexity strategies for modelling urban floodplain inundation. Geomorphology, 2007, 90, 226-243.	2.6	111
9	A Comparison of Methods for Streamflow Uncertainty Estimation. Water Resources Research, 2018, 54, 7149-7176.	4.2	108
10	Uncertainty in hydrological signatures for gauged and ungauged catchments. Water Resources Research, 2016, 52, 1847-1865.	4.2	104
11	Hydrological field data from a modeller's perspective: Part 2: processâ€“based evaluation of model hypotheses. Hydrological Processes, 2011, 25, 523-543.	2.6	103
12	Accelerating advances in continental domain hydrologic modeling. Water Resources Research, 2015, 51, 10078-10091.	4.2	102
13	Operational hydrological data assimilation with the recursive ensemble Kalman filter. Hydrology and Earth System Sciences, 2013, 17, 21-38.	4.9	92
14	Hydrological data uncertainty and its implications. Wiley Interdisciplinary Reviews: Water, 2018, 5, e1319.	6.5	89
15	Do timeâ€“variable tracers aid the evaluation of hydrological model structure? A multimodel approach. Water Resources Research, 2012, 48, .	4.2	86
16	Linking hydrologic signatures to hydrologic processes: A review. Hydrological Processes, 2020, 34, 1393-1409.	2.6	82
17	Rating curve estimation under epistemic uncertainty. Hydrological Processes, 2015, 29, 1873-1882.	2.6	69
18	Five guidelines for selecting hydrological signatures. Hydrological Processes, 2017, 31, 4757-4761.	2.6	68

#	ARTICLE	IF	CITATIONS
19	Spatial variability of hydrological processes and model structure diagnostics in a 50km <sup>2</sup> catchment. <i>Hydrological Processes</i> , 2014, 28, 4896-4913.	2.6	64
20	Influence of soil and climate on root zone storage capacity. <i>Water Resources Research</i> , 2016, 52, 2009-2024.	4.2	62
21	Rainfall-runoff model calibration using informal likelihood measures within a Markov chain Monte Carlo sampling scheme. <i>Water Resources Research</i> , 2009, 45, .	4.2	60
22	How uncertainty analysis of streamflow data can reduce costs and promote robust decisions in water management applications. <i>Water Resources Research</i> , 2017, 53, 5220-5228.	4.2	60
23	A review of hydrologic signatures and their applications. <i>Wiley Interdisciplinary Reviews: Water</i> , 2021, 8, .	6.5	55
24	Panta Rhei 2013-2015: global perspectives on hydrology, society and change. <i>Hydrological Sciences Journal</i> , 0, , 1-18.	2.6	53
25	End-to-end flood risk assessment: A coupled model cascade with uncertainty estimation. <i>Water Resources Research</i> , 2008, 44, .	4.2	51
26	Impact of Stage Measurement Errors on Streamflow Uncertainty. <i>Water Resources Research</i> , 2018, 54, 1952-1976.	4.2	50
27	Validation of a national hydrological model. <i>Journal of Hydrology</i> , 2016, 541, 800-815.	5.4	49
28	mizuRoute version 1: a river network routing tool for a continental domain water resources applications. <i>Geoscientific Model Development</i> , 2016, 9, 2223-2238.	3.6	42
29	A Decade of Water Storage Changes Across the Contiguous United States From GPS and Satellite Gravity. <i>Geophysical Research Letters</i> , 2019, 46, 13006-13015.	4.0	41
30	Robust informational entropy-based descriptors of flow in catchment hydrology. <i>Hydrological Sciences Journal</i> , 2016, 61, 1-18.	2.6	38
31	Use of an entropy-based metric in multiobjective calibration to improve model performance. <i>Water Resources Research</i> , 2014, 50, 8066-8083.	4.2	37
32	Characteristics and controls of variability in soil moisture and groundwater in a headwater catchment. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 1767-1786.	4.9	36
33	Including Regional Knowledge Improves Baseflow Signature Predictions in Large Sample Hydrology. <i>Water Resources Research</i> , 2021, 57, e2020WR028354.	4.2	30
34	Field measurement of groundwater recharge under irrigation in Canterbury, New Zealand, using drainage lysimeters. <i>Agricultural Water Management</i> , 2016, 166, 17-32.	5.6	29
35	TOSSH: A Toolbox for Streamflow Signatures in Hydrology. <i>Environmental Modelling and Software</i> , 2021, 138, 104983.	4.5	26
36	Nonparametric catchment clustering using the data depth function. <i>Hydrological Sciences Journal</i> , 2016, 61, 2649-2667.	2.6	21

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37	Deriving hydrological signatures from soil moisture data. <i>Hydrological Processes</i> , 2020, 34, 1410-1427.	2.6	18
38	Modeling surface water-groundwater interaction in New Zealand: Model development and application. <i>Hydrological Processes</i> , 2017, 31, 925-934.	2.6	17
39	Use of the data depth function to differentiate between case of interpolation and extrapolation in hydrological model prediction. <i>Journal of Hydrology</i> , 2013, 477, 213-228.	5.4	16
40	Effect of spatial variability and seasonality in soil moisture on drainage thresholds and fluxes in a conceptual hydrological model. <i>Hydrological Processes</i> , 2012, 26, 2838-2844.	2.6	14
41	Tracing sources of stormflow and groundwater recharge in an urban, semi-arid watershed using stable isotopes. <i>Journal of Hydrology: Regional Studies</i> , 2021, 34, 100806.	2.4	9
42	Information content of snow hydrological signatures based on streamflow, precipitation and air temperature. <i>Hydrological Processes</i> , 2020, 34, 2763-2779.	2.6	8
43	Large Scale Evaluation of Relationships Between Hydrologic Signatures and Processes. <i>Water Resources Research</i> , 2022, 58, .	4.2	8
44	Scientific debate of Panta Rhei research – how to advance our knowledge of changes in hydrology and society?. <i>Hydrological Sciences Journal</i> , 0, , 1-3.	2.6	7
45	A soil moisture monitoring network to assess controls on runoff generation during atmospheric river events. <i>Hydrological Processes</i> , 2021, 35, .	2.6	7
46	Impacts of observational uncertainty on analysis and modelling of hydrological processes: Preface. <i>Hydrological Processes</i> , 2022, 36, .	2.6	5
47	A taxonomy of hydrological processes and watershed function. <i>Hydrological Processes</i> , 2022, 36, .	2.6	5
48	A signature-based approach to quantify soil moisture dynamics under contrasting land uses. <i>Hydrological Processes</i> , 2022, 36, .	2.6	4
49	Preface: Linking landscape organisation and hydrological functioning: from hypotheses and observations to concepts, models and understanding. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 5277-5285.	4.9	3
50	Experimental Coupling of TOPMODEL with the National Water Model: Effects of Coupling Interface Complexity on Model Performance. <i>Journal of the American Water Resources Association</i> , 0, , .	2.4	1