

Hilary K Mcmillan

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

3,600
citations

147726

31
h-index

214721

47
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62
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docs citations

62
times ranked

3801
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | “Panta Rhei” Everything Flows: Change in hydrology and society The IAHS Scientific Decade 2013–2022. <i>Hydrological Sciences Journal</i> , 2013, 58, 1256-1275. | 1.2 | 569 |
| 2 | Benchmarking observational uncertainties for hydrology: rainfall, river discharge and water quality. <i>Hydrological Processes</i> , 2012, 26, 4078-4111. | 1.1 | 345 |
| 3 | Rainfall uncertainty in hydrological modelling: An evaluation of multiplicative error models. <i>Journal of Hydrology</i> , 2011, 400, 83-94. | 2.3 | 195 |
| 4 | Constraining dynamic TOPMODEL responses for imprecise water table information using fuzzy rule based performance measures. <i>Journal of Hydrology</i> , 2004, 291, 254-277. | 2.3 | 158 |
| 5 | Impacts of uncertain river flow data on rainfall-runoff model calibration and discharge predictions. <i>Hydrological Processes</i> , 2010, 24, 1270-1284. | 1.1 | 136 |
| 6 | Uncertainty in hydrological signatures. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 3951-3968. | 1.9 | 127 |
| 7 | Hydrological field data from a modeller's perspective: Part 1. Diagnostic tests for model structure. <i>Hydrological Processes</i> , 2011, 25, 511-522. | 1.1 | 121 |
| 8 | Reduced complexity strategies for modelling urban floodplain inundation. <i>Geomorphology</i> , 2007, 90, 226-243. | 1.1 | 111 |
| 9 | A Comparison of Methods for Streamflow Uncertainty Estimation. <i>Water Resources Research</i> , 2018, 54, 7149-7176. | 1.7 | 108 |
| 10 | Uncertainty in hydrological signatures for gauged and ungauged catchments. <i>Water Resources Research</i> , 2016, 52, 1847-1865. | 1.7 | 104 |
| 11 | Hydrological field data from a modeller's perspective: Part 2: process-based evaluation of model hypotheses. <i>Hydrological Processes</i> , 2011, 25, 523-543. | 1.1 | 103 |
| 12 | Accelerating advances in continental domain hydrologic modeling. <i>Water Resources Research</i> , 2015, 51, 10078-10091. | 1.7 | 102 |
| 13 | Operational hydrological data assimilation with the recursive ensemble Kalman filter. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 21-38. | 1.9 | 92 |
| 14 | Hydrological data uncertainty and its implications. <i>Wiley Interdisciplinary Reviews: Water</i> , 2018, 5, e1319. | 2.8 | 89 |
| 15 | Do time-variable tracers aid the evaluation of hydrological model structure? A multimodel approach. <i>Water Resources Research</i> , 2012, 48, . | 1.7 | 86 |
| 16 | Linking hydrologic signatures to hydrologic processes: A review. <i>Hydrological Processes</i> , 2020, 34, 1393-1409. | 1.1 | 82 |
| 17 | Rating curve estimation under epistemic uncertainty. <i>Hydrological Processes</i> , 2015, 29, 1873-1882. | 1.1 | 69 |
| 18 | Five guidelines for selecting hydrological signatures. <i>Hydrological Processes</i> , 2017, 31, 4757-4761. | 1.1 | 68 |

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|----|--|-----|-----------|
| 19 | Spatial variability of hydrological processes and model structure diagnostics in a 50km ² catchment. <i>Hydrological Processes</i> , 2014, 28, 4896-4913. | 1.1 | 64 |
| 20 | Influence of soil and climate on root zone storage capacity. <i>Water Resources Research</i> , 2016, 52, 2009-2024. | 1.7 | 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, . | 1.7 | 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. | 1.7 | 60 |
| 23 | A review of hydrologic signatures and their applications. <i>Wiley Interdisciplinary Reviews: Water</i> , 2021, 8, . | 2.8 | 55 |
| 24 | Panta Rhei 2013-2015: global perspectives on hydrology, society and change. <i>Hydrological Sciences Journal</i> , 0, , 1-18. | 1.2 | 53 |
| 25 | End-to-end flood risk assessment: A coupled model cascade with uncertainty estimation. <i>Water Resources Research</i> , 2008, 44, . | 1.7 | 51 |
| 26 | Impact of Stage Measurement Errors on Streamflow Uncertainty. <i>Water Resources Research</i> , 2018, 54, 1952-1976. | 1.7 | 50 |
| 27 | Validation of a national hydrological model. <i>Journal of Hydrology</i> , 2016, 541, 800-815. | 2.3 | 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. | 1.3 | 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. | 1.5 | 41 |
| 30 | Robust informational entropy-based descriptors of flow in catchment hydrology. <i>Hydrological Sciences Journal</i> , 2016, 61, 1-18. | 1.2 | 38 |
| 31 | Use of an entropy-based metric in multiobjective calibration to improve model performance. <i>Water Resources Research</i> , 2014, 50, 8066-8083. | 1.7 | 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. | 1.9 | 36 |
| 33 | Including Regional Knowledge Improves Baseflow Signature Predictions in Large Sample Hydrology. <i>Water Resources Research</i> , 2021, 57, e2020WR028354. | 1.7 | 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. | 2.4 | 29 |
| 35 | TOSSH: A Toolbox for Streamflow Signatures in Hydrology. <i>Environmental Modelling and Software</i> , 2021, 138, 104983. | 1.9 | 26 |
| 36 | Nonparametric catchment clustering using the data depth function. <i>Hydrological Sciences Journal</i> , 2016, 61, 2649-2667. | 1.2 | 21 |

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|----|---|-----|-----------|
| 37 | Deriving hydrological signatures from soil moisture data. <i>Hydrological Processes</i> , 2020, 34, 1410-1427. | 1.1 | 18 |
| 38 | Modeling surface water-groundwater interaction in New Zealand: Model development and application. <i>Hydrological Processes</i> , 2017, 31, 925-934. | 1.1 | 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. | 2.3 | 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. | 1.1 | 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. | 1.0 | 9 |
| 42 | Information content of snow hydrological signatures based on streamflow, precipitation and air temperature. <i>Hydrological Processes</i> , 2020, 34, 2763-2779. | 1.1 | 8 |
| 43 | Large Scale Evaluation of Relationships Between Hydrologic Signatures and Processes. <i>Water Resources Research</i> , 2022, 58, . | 1.7 | 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. | 1.2 | 7 |
| 45 | A soil moisture monitoring network to assess controls on runoff generation during atmospheric river events. <i>Hydrological Processes</i> , 2021, 35, . | 1.1 | 7 |
| 46 | Impacts of observational uncertainty on analysis and modelling of hydrological processes: Preface. <i>Hydrological Processes</i> , 2022, 36, . | 1.1 | 5 |
| 47 | A taxonomy of hydrological processes and watershed function. <i>Hydrological Processes</i> , 2022, 36, . | 1.1 | 5 |
| 48 | A signature-based approach to quantify soil moisture dynamics under contrasting land uses. <i>Hydrological Processes</i> , 2022, 36, . | 1.1 | 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. | 1.9 | 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, , . | 1.0 | 1 |