R A Woods

List of Publications by Year
in descending order

80 papers	9,713 citations	41344 49 h-index	69250 77 g-index
113 all docs	113 docs citations	113 times ranked	7801 citing authors

#	Article	IF	Citations
1	A decade of Predictions in Ungauged Basins (PUB)â€"a review. Hydrological Sciences Journal, 2013, 58, 1198-1255.	2.6	821
2	Catchment Classification and Hydrologic Similarity. Geography Compass, 2007, 1, 901-931.	2.7	602
3	Technical note: Inherent benchmark or not? Comparing Nashâ€"Sutcliffe and Klingâ€"Gupta efficiency scores. Hydrology and Earth System Sciences, 2019, 23, 4323-4331.	4.9	582
4	A precipitation shift from snow towards rain leads to a decrease in streamflow. Nature Climate Change, 2014, 4, 583-586.	18.8	545
5	Climate change and mountain water resources: overview and recommendations for research, management and policy. Hydrology and Earth System Sciences, 2011, 15, 471-504.	4.9	476
6	Framework for Understanding Structural Errors (FUSE): A modular framework to diagnose differences between hydrological models. Water Resources Research, 2008, 44, .	4.2	461
7	Hydrological data assimilation with the ensemble Kalman filter: Use of streamflow observations to update states in a distributed hydrological model. Advances in Water Resources, 2008, 31, 1309-1324.	3.8	395
8	A unified approach for processâ€based hydrologic modeling: 1. Modeling concept. Water Resources Research, 2015, 51, 2498-2514.	4.2	354
9	Dominant flood generating mechanisms across the United States. Geophysical Research Letters, 2016, 43, 4382-4390.	4.0	313
10	Representing spatial variability of snow water equivalent in hydrologic and landâ€surface models: A review. Water Resources Research, 2011, 47, .	4.2	275
11	Rainfall uncertainty in hydrological modelling: An evaluation of multiplicative error models. Journal of Hydrology, 2011, 400, 83-94.	5.4	195
12	The evolution of process-based hydrologic models: historical challenges and the collective quest for physical realism. Hydrology and Earth System Sciences, 2017, 21, 3427-3440.	4.9	177
13	A unified approach for processâ€based hydrologic modeling: 2. Model implementation and case studies. Water Resources Research, 2015, 51, 2515-2542.	4.2	173
14	Patterns of similarity of seasonal water balances: A window into streamflow variability over a range of time scales. Water Resources Research, 2014, 50, 5638-5661.	4.2	167
15	Hillslope threshold response to rainfall: (1) A field based forensic approach. Journal of Hydrology, 2010, 393, 65-76.	5.4	161
16	A novel framework for discharge uncertainty quantification applied to 500 <scp>UK</scp> gauging stations. Water Resources Research, 2015, 51, 5531-5546.	4.2	159
17	Climate and landscape controls on water balance model complexity over changing timescales. Water Resources Research, 2002, 38, 50-1-50-17.	4.2	152
18	Consistency between hydrological models and field observations: linking processes at the hillslope scale to hydrological responses at the watershed scale. Hydrological Processes, 2009, 23, 311-319.	2.6	128

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19	A Global Assessment of Runoff Sensitivity to Changes in Precipitation, Potential Evaporation, and Other Factors. Water Resources Research, 2017, 53, 8475-8486.	4.2	125
20	Hydrological field data from a modeller's perspective: Part 1. Diagnostic tests for model structure. Hydrological Processes, 2011, 25, 511-522.	2.6	121
21	A synthesis of space-time variability in storm response: Rainfall, runoff generation, and routing. Water Resources Research, 1999, 35, 2469-2485.	4.2	112
22	Comparing and combining physically-based and empirically-based approaches for estimating the hydrology of ungauged catchments. Journal of Hydrology, 2014, 508, 227-239.	5.4	105
23	Application of TOPNET in the distributed model intercomparison project. Journal of Hydrology, 2004, 298, 178-201.	5.4	104
24	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
25	Recent changes in extreme floods across multiple continents. Environmental Research Letters, 2017, 12, 114035.	5.2	102
26	Improved eco-hydrological classification of rivers. River Research and Applications, 2005, 21, 609-628.	1.7	101
27	Ecophysiology of Wetland Plant Roots: A Modelling Comparison of Aeration in Relation to Species Distribution. Annals of Botany, 2000, 86, 675-685.	2.9	100
28	A Quantitative Hydrological Climate Classification Evaluated With Independent Streamflow Data. Water Resources Research, 2018, 54, 5088-5109.	4.2	100
29	Analytical model of seasonal climate impacts on snow hydrology: Continuous snowpacks. Advances in Water Resources, 2009, 32, 1465-1481.	3.8	90
30	Investigating the representative elementary area concept: An approach based on field data. Hydrological Processes, 1995, 9, 291-312.	2.6	89
31	Spatial distribution of soil moisture over 6 and 30cm depth, Mahurangi river catchment, New Zealand. Journal of Hydrology, 2003, 276, 254-274.	5.4	88
32	CAMELS-GB: hydrometeorological time series and landscape attributes for 671 catchments in Great Britain. Earth System Science Data, 2020, 12, 2459-2483.	9.9	87
33	Quantifying space-time dynamics of flood event types. Journal of Hydrology, 2010, 394, 213-229.	5.4	82
34	Eventâ€based classification for global study of river flood generating processes. Hydrological Processes, 2020, 34, 1514-1529.	2.6	80
35	The relative roles of climate, soil, vegetation and topography in determining seasonal and long-term catchment dynamics. Advances in Water Resources, 2003, 26, 295-309.	3.8	77
36	Modular Assessment of Rainfallâ€"Runoff Models Toolbox (MARRMoT) v1.2: an open-source, extendable framework providing implementations of 46 conceptual hydrologic models as continuous state-space formulations. Geoscientific Model Development, 2019, 12, 2463-2480.	3.6	74

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37	A Brief Analysis of Conceptual Model Structure Uncertainty Using 36 Models and 559 Catchments. Water Resources Research, 2020, 56, e2019WR025975.	4.2	72
38	Modeling the spatial variability of subsurface runoff using a topographic index. Water Resources Research, 1997, 33, 1061-1073.	4.2	69
39	Generalised synthesis of spaceâ€“time variability in flood response: An analytical framework. Journal of Hydrology, 2010, 394, 198-212.	5.4	67
40	Spatial Interpolation of Daily Potential Evapotranspiration for New Zealand Using a Spline Model. Journal of Hydrometeorology, 2007, 8, 430-438.	1.9	64
41	Spatial variability of hydrological processes and model structure diagnostics in a 50â€‰km²catchment. Hydrological Processes, 2014, 28, 4896-4913.	2.6	64
42	Scaling, similarity, and the fourth paradigm for hydrology. Hydrology and Earth System Sciences, 2017, 21, 3701-3713.	4.9	63
43	Streamflow sensitivity to water storage changes across Europe. Geophysical Research Letters, 2016, 43, 1980-1987.	4.0	59
44	Simulating Runoff Under Changing Climatic Conditions: A Framework for Model Improvement. Water Resources Research, 2018, 54, 9812-9832.	4.2	58
45	A rule based quality control method for hourly rainfall data and a 1â€¯km resolution gridded hourly rainfall dataset for Great Britain: CEH-GEAR1hr. Journal of Hydrology, 2018, 564, 930-943.	5.4	58
46	The Selwyn River of New Zealand: a benchmark system for alluvial plain rivers. River Research and Applications, 2008, 24, 1-21.	1.7	54
47	Analytical assessment and parameter estimation of a low-dimensional groundwater model. Journal of Hydrology, 2009, 377, 143-154.	5.4	54
48	DECIPHeR v1: Dynamic fluxEs and ConnectIvity for Predictions of HydRology. Geoscientific Model Development, 2019, 12, 2285-2306.	3.6	51
49	Evaluation of the effects of general circulation models' subgrid variability and patchiness of rainfall and soil moisture on land surface water balance fluxes. Hydrological Processes, 1995, 9, 697-717.	2.6	46
50	How Do Climate and Catchment Attributes Influence Flood Generating Processes? A Largeâ€Sample Study for 671 Catchments Across the Contiguous USA. Water Resources Research, 2021, 57, e2020WR028300.	4.2	46
51	Is There a Baseflow Budyko Curve?. Water Resources Research, 2019, 55, 2838-2855.	4.2	45
52	Contributing factors for drought in United States forest ecosystems under projected future climates and their uncertainty. Forest Ecology and Management, 2016, 380, 299-308.	3.2	43
53	mizuRoute version 1: a river network routing tool for a continental domain water resources applications. Geoscientific Model Development, 2016, 9, 2223-2238.	3.6	42
54	A connection between topographically driven runoff generation and channel network structure. Water Resources Research, 1997, 33, 2939-2950.	4.2	40

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55	Stormflow generation: A metaâ€analysis of field evidence from small, forested catchments. Water Resources Research, 2015, 51, 3730-3753.	4.2	38
56	Localized erosion affects national carbon budget. Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	35
57	Choosing Regional Futures: Challenges and choices in building integrated models to support longâ€term regional planning in New Zealand*. Regional Science Policy and Practice, 2008, 1, 85-108.	1.6	32
58	Dominant physical controls on hourly flow predictions and the role of spatial variability: Mahurangi catchment, New Zealand. Advances in Water Resources, 2003, 26, 219-235.	3.8	31
59	Global bimodal precipitation seasonality: A systematic overview. International Journal of Climatology, 2019, 39, 558-567.	3.5	31
60	Including Regional Knowledge Improves Baseflow Signature Predictions in Large Sample Hydrology. Water Resources Research, 2021, 57, e2020WR028354.	4.2	30
61	Scale and scaling in hydrology. Hydrological Processes, 2004, 18, 1369-1371.	2.6	29
62	Predicting catchment-scale soil moisture status with limited field measurements. Hydrological Processes, 1995, 9, 445-467.	2.6	28
63	Predicting space-time variability of hourly streamflow and the role of climate seasonality: Mahurangi Catchment, New Zealand. Hydrological Processes, 2003, 17, 2171-2193.	2.6	27
64	A simple framework to quantitatively describe monthly precipitation and temperature climatology. International Journal of Climatology, 2016, 36, 3161-3174.	3.5	27
65	TOSSH: A Toolbox for Streamflow Signatures in Hydrology. Environmental Modelling and Software, 2021, 138, 104983.	4.5	26
66	On doing hydrology with dragons: Realizing the value of perceptual models and knowledge accumulation. Wiley Interdisciplinary Reviews: Water, 2021, 8, e1550.	6.5	26
67	Variable bucket representation of TOPMODEL and investigation of the effects of rainfall heterogeneity. , 1997, 11, 1307-1330.		25
68	Increased flexibility in base flow modelling using a power law transmissivity profile. Hydrological Processes, 2008, 22, 2667-2671.	2.6	23
69	Hydrological signatures describing the translation of climate seasonality into streamflow seasonality. Hydrology and Earth System Sciences, 2020, 24, 561-580.	4.9	20
70	Improved Fitting for Threeâ€Parameter Muskingum Procedure. Journal of Hydraulic Engineering, 1988, 114, 516-528.	1.5	19
71	Prediction of low flows in ungauged basins. , 2013, , 163-188.		19
72	Prediction of annual runoff in ungauged basins. , 2013, , 70-101.		14

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73	An analytical model for soil-atmosphere feedback. Hydrology and Earth System Sciences, 2012, 16, 1863-1878.	4.9	11
74	A Practical, Objective, and Robust Technique to Directly Estimate Catchment Response Time. Water Resources Research, 2021, 57, e2020WR028201.	4.2	10
75	Scaling, Similarity, and the Fourth Paradigm for Hydrology. , 2017, 21, 3701-3713.		7
76	An Objective Timeâ€Seriesâ€Analysis Method for Rainfallâ€Runoff Event Identification. Water Resources Research, 2022, 58, .	4.2	6
77	Invigorating Hydrological Research Through Journal Publications. Water Resources Research, 2020, 56, .	4.2	5
78	Comment on â€˜C.-P. Tung, N.-M. Hong, C.-H. Chen and Y.-C. Tan, Regional daily baseflow prediction.Hydrological Processes, 18(2004) 2147â€“2164â€™. Hydrological Processes, 2008, 22, 883-886.	2.6	4
79	Closure to â€œ Improved Fitting for Threeâ€Parameter Muskingum Procedure â€•by Terence O'Donnell, Charles P. Pearson, and Ross A. Woods (May, 1988, Vol. 114, No. 5). Journal of Hydraulic Engineering, 1990, 116, 1057-1058.	1.5	0
80	Universities and schools offering post-secondary programs related to the forest sector. Forestry Chronicle, 1991, 67, 378-383.	0.6	0