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List of Publications by Year
in descending order

Version: 2024-02-01

43 papers	2,793 citations	201674 27 h-index	265206 42 g-index
69 all docs	69 docs citations	69 times ranked	3027 citing authors

#	Article	IF	Citations
1	Toward Improved Predictions in Ungauged Basins: Exploiting the Power of Machine Learning. Water Resources Research, 2019, 55, 11344-11354.	4.2	279
2	Towards learning universal, regional, and local hydrological behaviors via machine learning applied to large-sample datasets. Hydrology and Earth System Sciences, 2019, 23, 5089-5110.	4.9	276
3	What Role Does Hydrological Science Play in the Age of Machine Learning?. Water Resources Research, 2021, 57, e2020WR028091.	4.2	196
4	The Plumbing of Land Surface Models: Benchmarking Model Performance. Journal of Hydrometeorology, 2015, 16, 1425-1442.	1.9	191
5	A Ranking of Hydrological Signatures Based on Their Predictability in Space. Water Resources Research, 2018, 54, 8792-8812.	4.2	144
6	Evaluating the utility of satellite soil moisture retrievals over irrigated areas and the ability of land data assimilation methods to correct for unmodeled processes. Hydrology and Earth System Sciences, 2015, 19, 4463-4478.	4.9	134
7	Partitioning evapotranspiration in semiarid grassland and shrubland ecosystems using time series of soil surface temperature. Agricultural and Forest Meteorology, 2009, 149, 59-72.	4.8	107
8	Rainfallâ€“runoff prediction at multiple timescales with a single Long Short-Term Memory network. Hydrology and Earth System Sciences, 2021, 25, 2045-2062.	4.9	106
9	A philosophical basis for hydrological uncertainty. Hydrological Sciences Journal, 2016, 61, 1666-1678.	2.6	98
10	Debatesâ€”the future of hydrological sciences: A (common) path forward? Using models and data to learn: A systems theoretic perspective on the future of hydrological science. Water Resources Research, 2014, 50, 5351-5359.	4.2	91
11	The quantity and quality of information in hydrologic models. Water Resources Research, 2015, 51, 524-538.	4.2	85
12	Benchmarking NLDAS-2 Soil Moisture and Evapotranspiration to Separate Uncertainty Contributions. Journal of Hydrometeorology, 2016, 17, 745-759.	1.9	82
13	Benchmarking of a Physically Based Hydrologic Model. Journal of Hydrometeorology, 2017, 18, 2215-2225.	1.9	79
14	The impact of vertical measurement depth on the information content of soil moisture times series data. Geophysical Research Letters, 2014, 41, 4997-5004.	4.0	59
15	Estimating information entropy for hydrological data: Oneâ€dimensional case. Water Resources Research, 2014, 50, 5003-5018.	4.2	57
16	Deep learning rainfallâ€“runoff predictions of extreme events. Hydrology and Earth System Sciences, 2022, 26, 3377-3392.	4.9	55
17	Postâ€Processing the National Water Model with Long Shortâ€Term Memory Networks for Streamflow Predictions and Model Diagnostics. Journal of the American Water Resources Association, 2021, 57, 885-905.	2.4	53
18	The Impact of Vertical Measurement Depth on the Information Content of Soil Moisture for Latent Heat Flux Estimation. Journal of Hydrometeorology, 2016, 17, 2419-2430.	1.9	46

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19	The Plumbing of Land Surface Models: Is Poor Performance a Result of Methodology or Data Quality?. Journal of Hydrometeorology, 2016, 17, 1705-1723.	1.9	43
20	Performance Metrics, Error Modeling, and Uncertainty Quantification. Monthly Weather Review, 2016, 144, 607-613.	1.4	42
21	Benchmarking and Process Diagnostics of Land Models. Journal of Hydrometeorology, 2018, 19, 1835-1852.	1.9	41
22	Uncertainty estimation with deep learning for rainfallâ€“runoff modeling. Hydrology and Earth System Sciences, 2022, 26, 1673-1693.	4.9	38
23	A note on leveraging synergy in multiple meteorological data sets with deep learning for rainfallâ€“runoff modeling. Hydrology and Earth System Sciences, 2021, 25, 2685-2703.	4.9	35
24	Parameter Sensitivity of the Noah-MP Land Surface Model with Dynamic Vegetation. Journal of Hydrometeorology, 2018, 19, 815-830.	1.9	33
25	Does Information Theory Provide a New Paradigm for Earth Science? Hypothesis Testing. Water Resources Research, 2020, 56, e2019WR024918.	4.2	33
26	Information Theory for Model Diagnostics: Structural Error is Indicated by Tradeâ€Off Between Functional and Predictive Performance. Water Resources Research, 2019, 55, 6534-6554.	4.2	29
27	The Efficiency of Data Assimilation. Water Resources Research, 2018, 54, 6374-6392.	4.2	27
28	Coupling diffusion and maximum entropy models to estimate thermal inertia. Remote Sensing of Environment, 2012, 119, 222-231.	11.0	26
29	Quantifying Process Connectivity With Transfer Entropy in Hydrologic Models. Water Resources Research, 2019, 55, 4613-4629.	4.2	26
30	Information loss in approximately Bayesian estimation techniques: A comparison of generative and discriminative approaches to estimating agricultural productivity. Journal of Hydrology, 2013, 507, 163-173.	5.4	23
31	Ensembles vs. information theory: supporting science under uncertainty. Frontiers of Earth Science, 2018, 12, 653-660.	2.1	21
32	An approach to quantifying the efficiency of a Bayesian filter. Water Resources Research, 2013, 49, 2164-2173.	4.2	16
33	NeuralHydrology â€” A Python library for Deep Learning research in hydrology. Journal of Open Source Software, 2022, 7, 4050.	4.6	16
34	Bayesian analysis of the impact of rainfall data product on simulated slope failure for North Carolina locations. Computational Geosciences, 2019, 23, 495-522.	2.4	12
35	Fundamentals of Data Assimilation and Theoretical Advances. , 2019, , 675-699.		12
36	Fundamentals of Data Assimilation and Theoretical Advances. , 2018, , 1-26.		12

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37	Likelihood parameter estimation for calibrating a soil moisture model using radar bakscatter. Remote Sensing of Environment, 2010, 114, 2564-2574.	11.0	11
38	Electromagnetic induction for mapping textural contrasts of mine tailing deposits. Journal of Applied Geophysics, 2013, 89, 11-20.	2.1	11
39	Model representation of the coupling between evapotranspiration and soil water content at different depths. Hydrology and Earth System Sciences, 2020, 24, 581-594.	4.9	11
40	Methodology to evaluate the performance of simulation models for alternative compiler and operating system configurations. Computers and Electronics in Agriculture, 2012, 81, 62-71.	7.7	9
41	Nonparametric triple collocation. Water Resources Research, 2017, 53, 5516-5530.	4.2	9
42	Comment on â€œA blueprint for processâ€based modeling of uncertain hydrological systemsâ€•by Alberto Montanari and Demetris Koutsoyiannis. Water Resources Research, 2014, 50, 6260-6263.	4.2	5
43	Combining Parametric Land Surface Models with Machine Learning. , 2020, , .		4