Lucy A Marshall

List of Publications by Year
in descending order

90 papers	2,996 citations	186265 28 h-index	182427 51 g-index
95 all docs	95 docs citations	95 times ranked	3432 citing authors

#	Article	IF	Citations
1	Hydrologic connectivity between landscapes and streams: Transferring reachâ€•and plotâ€scale understanding to the catchment scale. Water Resources Research, 2009, 45, .	4.2	430
2	A comparative study of Markov chain Monte Carlo methods for conceptual rainfall-runoff modeling. Water Resources Research, 2004, 40, .	4.2	193
3	Investigating controls on the thermal sensitivity of Pennsylvania streams. Hydrological Processes, 2012, 26, 771-785.	2.6	162
4	Object-oriented crop classification using multitemporal ETM+ SLC-off imagery and random forest. GIScience and Remote Sensing, 2013, 50, 418-436.	5.9	88
5	Modeling residual hydrologic errors with Bayesian inference. Journal of Hydrology, 2015, 528, 29-37.	5.4	88
6	Development of a formal likelihood function for improved Bayesian inference of ephemeral catchments. Water Resources Research, 2010, 46, .	4.2	83
7	Hydrological model selection: A Bayesian alternative. Water Resources Research, 2005, 41, .	4.2	78
8	Landscape structure and climate influences on hydrologic response. Water Resources Research, 2011, 47, .	4.2	76
9	Hydrologic modeling in dynamic catchments: A data assimilation approach. Water Resources Research, 2016, 52, 3350-3372.	4.2	76
10	Towards dynamic catchment modelling: a Bayesian hierarchical mixtures of experts framework. Hydrological Processes, 2007, 21, 847-861.	2.6	73
11	ESTIMATING THERMAL REGIMES OF BULL TROUT AND ASSESSING THE POTENTIAL EFFECTS OF CLIMATE WARMING ON CRITICAL HABITATS. River Research and Applications, 2014, 30, 204-216.	1.7	68
12	Dataâ€Driven Model Uncertainty Estimation in Hydrologic Data Assimilation. Water Resources Research, 2018, 54, 1252-1280.	4.2	64
13	Detecting non-stationary hydrologic model parameters in a paired catchment system using data assimilation. Advances in Water Resources, 2016, 94, 103-119.	3.8	57
14	Modeling the catchment via mixtures: Issues of model specification and validation. Water Resources Research, 2006, 42, .	4.2	55
15	Generalized likelihood uncertainty estimation (GLUE) and approximate Bayesian computation: What's the connection?. Water Resources Research, 2012, 48, .	4.2	55
16	Modeling Water Quality in Watersheds: From Here to the Next Generation. Water Resources Research, 2020, 56, e2020WR027721.	4.2	54
17	Revisiting Pan Evaporation Trends in Australia a Decade on. Geophysical Research Letters, 2018, 45, 11,164.	4.0	53
18	Bayesian calibration and uncertainty analysis of hydrological models: A comparison of adaptive Metropolis and sequential Monte Carlo samplers. Water Resources Research, 2011, 47, .	4.2	49

#	Article	IF	Citations
19	Calibrating and assessing uncertainty in coastal numerical models. Coastal Engineering, 2017, 125, 28-41.	4.0	43
20	A method for combining SRTM DEM and ASTER GDEM2 to improve topography estimation in regions without reference data. Remote Sensing of Environment, 2018, 210, 229-241.	11.0	43
21	Bayesian Networks in coastal engineering: Distinguishing descriptive and predictive applications. Coastal Engineering, 2018, 135, 16-30.	4.0	42
22	Taking the pulse of hydrology education. Hydrological Processes, 2007, 21, 1789-1792.	2.6	40
23	Efficient hydrological model parameter optimization with Sequential Monte Carlo sampling. Environmental Modelling and Software, 2012, 38, 283-295.	4.5	38
24	Implications of future climate change for event-based hydrologic models. Advances in Water Resources, 2018, 119, 95-110.	3.8	37
25	Exploring uncertainty and model predictive performance concepts via a modular snowmelt-runoff modeling framework. Environmental Modelling and Software, 2010, 25, 691-701.	4.5	34
26	It takes a community to raise a hydrologist: the Modular Curriculum for Hydrologic Advancement (MOCHA). Hydrology and Earth System Sciences, 2012, 16, 3405-3418.	4.9	31
27	Approximate Bayesian Computation and Bayesâ€™ Linear Analysis: Toward High-Dimensional ABC. Journal of Computational and Graphical Statistics, 2014, 23, 65-86.	1.7	31
28	Time-varying parameter models for catchments with land use change: the importance of model structure. Hydrology and Earth System Sciences, 2018, 22, 2903-2919.	4.9	31
29	Using field data to inform and evaluate a new model of catchment hydrologic connectivity. Water Resources Research, 2013, 49, 6834-6846.	4.2	30
30	A comparison of methods for discretizing continuous variables in Bayesian Networks. Environmental Modelling and Software, 2018, 108, 61-66.	4.5	30
31	Assessing the Potential Robustness of Conceptual Rainfallâ€Runoff Models Under a Changing Climate. Water Resources Research, 2018, 54, 5030-5049.	4.2	29
32	Bayesian LSTM With Stochastic Variational Inference for Estimating Model Uncertainty in Processâ€Based Hydrological Models. Water Resources Research, 2021, 57, e2021WR029772.	4.2	29
33	Quantifying watershed sensitivity to spatially variable N loading and the relative importance of watershed N retention mechanisms. Water Resources Research, 2011, 47, .	4.2	28
34	Landscape changes and their hydrologic effects: Interactions and feedbacks across scales. Earth-Science Reviews, 2021, 212, 103466.	9.1	27
35	A watershedâ€scale assessment of a process soil CO₂ production and efflux model. Water Resources Research, 2011, 47, .	4.2	26
36	Deriving daily water levels from satellite altimetry and land surface temperature for sparsely gauged catchments: A case study for the Mekong River. Remote Sensing of Environment, 2018, 212, 31-46.	11.0	26

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37	Fire and flood expand the floodplain shifting habitat mosaic concept. Freshwater Science, 2015, 34, 1366-1382.	1.8	25
38	Is Past Variability a Suitable Proxy for Future Change? A Virtual Catchment Experiment. Water Resources Research, 2020, 56, e2019WR026275.	4.2	22
39	Characterizing distributed hydrological model residual errors using a probabilistic long short-term memory network. Journal of Hydrology, 2021, 603, 126888.	5.4	22
40	A Bayesian method for multi-pollution source water quality model and seasonal water quality management in river segments. Environmental Modelling and Software, 2014, 57, 216-226.	4.5	21
41	Investigating strategies to improve hydrologic model performance in a changing climate. Journal of Hydrology, 2019, 579, 124219.	5.4	21
42	Environmental fate model for ultra-low-volume insecticide applications used for adult mosquito management. Science of the Total Environment, 2012, 438, 72-79.	8.0	20
43	Coevolution of machine learning and processâ€based modelling to revolutionize Earth and environmental sciences: A perspective. Hydrological Processes, 2022, 36, .	2.6	20
44	Changes in field-level cropping sequences: Indicators of shifting agricultural practices. Agriculture, Ecosystems and Environment, 2014, 189, 11-20.	5.3	19
45	Predicting hydrologic response through a hierarchical catchment knowledgebase: A Bayes empirical Bayes approach. Water Resources Research, 2014, 50, 1189-1204.	4.2	19
46	Tools for investigating the prior distribution in Bayesian hydrology. Journal of Hydrology, 2016, 538, 551-562.	5.4	19
47	Specifying a hierarchical mixture of experts for hydrologic modeling: Gating function variable selection. Water Resources Research, 2013, 49, 2926-2939.	4.2	18
48	Spatial Heterogeneity of Snow Density and Its Influence on Snow Water Equivalence Estimates in a Large Mountainous Basin. Hydrology, 2016, 3, 3.	3.0	18
49	A Bayesian alternative for multi-objective ecohydrological model specification. Journal of Hydrology, 2018, 556, 25-38.	5.4	18
50	Using 3D robust smoothing to fill land surface temperature gaps at the continental scale. International Journal of Applied Earth Observation and Geoinformation, 2019, 82, 101879.	2.8	18
51	The influence of data transformations in simulating Total Suspended Solids using Bayesian inference. Environmental Modelling and Software, 2019, 121, 104493.	4.5	17
52	Adoption of cropping sequences in northeast Montana: A spatio-temporal analysis. Agriculture, Ecosystems and Environment, 2014, 197, 77-87.	5.3	15
53	Projected warming portends seasonal shifts of stream temperatures in the Crown of the Continent Ecosystem, USA and Canada. Climatic Change, 2017, 144, 641-655.	3.6	15
54	Quantifying input error in hydrologic modeling using the Bayesian error analysis with reordering (BEAR) approach. Journal of Hydrology, 2021, 598, 126202.	5.4	14

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55	A coupled metabolicâ€hydraulic model and calibration scheme for estimating wholeâ€river metabolism during dynamic flow conditions. Limnology and Oceanography: Methods, 2017, 15, 847-866.	2.0	13
56	Insights on the impact of systematic model errors on data assimilation performance in changing catchments. Advances in Water Resources, 2018, 113, 202-222.	3.8	13
57	Hydrologic multi-model ensemble predictions using variational Bayesian deep learning. Journal of Hydrology, 2022, 604, 127221.	5.4	13
58	Creativity, Uncertainty, and Automated Model Building. Ground Water, 2017, 55, 693-697.	1.3	12
59	Modelling precipitation uncertainties in a multi-objective Bayesian ecohydrological setting. Advances in Water Resources, 2019, 123, 12-22.	3.8	12
60	The ensemble Kalman filter is an ABC algorithm. Statistics and Computing, 2012, 22, 1273-1276.	1.5	11
61	Characterising uncertainty in precipitation downscaling using a Bayesian approach. Advances in Water Resources, 2019, 129, 189-197.	3.8	11
62	Linking Changes in Land Cover and Land Use of the Lower Mekong Basin to Instream Nitrate and Total Suspended Solids Variations. Sustainability, 2020, 12, 2992.	3.2	11
63	Modelling climate change impacts on the Brahmaputra streamflow resulting from changes in snowpack attributes. Journal of Hydrology, 2021, 603, 126998.	5.4	11
64	A metric for attributing variability in modelled streamflows. Journal of Hydrology, 2016, 541, 1475-1487.	5.4	10
65	Quantifying the Effects of Sea Level Rise on Estuarine Drainage Systems. Water Resources Research, 2022, 58, .	4.2	10
66	A Beta Regression Model for Improved Solar Radiation Predictions. Journal of Applied Meteorology and Climatology, 2013, 52, 1923-1938.	1.5	9
67	Diagnostic calibration and crossâ€catchment transferability of a simple processâ€consistent hydrologic model. Hydrological Processes, 2016, 30, 5027-5038.	2.6	9
68	Projected Changes in the Tibetan Plateau Snowpack Resulting From Rising Global Temperatures. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	9
69	Typecasting catchments: Classification, directionality, and the pursuit of universality. Advances in Water Resources, 2018, 112, 245-253.	3.8	8
70	Attributing uncertainty in streamflow simulations due to variable inputs via the Quantile Flow Deviation metric. Advances in Water Resources, 2018, 116, 40-55.	3.8	7
71	Transboundary river catchment areas of developing countries: Potential and limitations of watershed models for the simulation of sediment and nutrient loads. A review. Journal of Hydrology: Regional Studies, 2019, 24, 100605.	2.4	7
72	Ecohydrologic Error Models for Improved Bayesian Inference in Remotely Sensed Catchments. Water Resources Research, 2019, 55, 4533-4549.	4.2	7

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73	Bayesian Model Calibration Using Surrogate Streamflow in Ungauged Catchments. Water Resources Research, 2022, 58, .	4.2	7
74	Assessing Goodness of Fit for Verifying Probabilistic Forecasts. Forecasting, 2021, 3, 763-773.	2.8	6
75	Mixtures of experts for understanding model discrepancy in dynamic computer models. Computational Statistics and Data Analysis, 2014, 71, 491-505.	1.2	5
76	Jointly Calibrating Hydrologic Model Parameters and State Adjustments. Water Resources Research, 2021, 57, e2020WR028499.	4.2	5
77	Improving the Combination of Satellite Soil Moisture Data Sets by Considering Error Cross Correlation: A Comparison Between Triple Collocation (TC) and Extended Double Instrumental Variable (EIVD) Alternatives. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 7285-7295.	6.3	5
78	Transboundary river basins: Scenarios of hydropower development and operation under extreme climate conditions. Science of the Total Environment, 2022, 803, 149828.	8.0	5
79	Quantifying input uncertainty in the calibration of water quality models: reordering errors via the secant method. Hydrology and Earth System Sciences, 2022, 26, 1203-1221.	4.9	5
80	Which Rainfall Errors Can Hydrologic Models Handle? Implications for Using Satelliteâ€Derived Products in Sparsely Gauged Catchments. Water Resources Research, 2022, 58, .	4.2	5
81	A single model ensemble versus a dynamic modeling platform: Semi-distributed rainfall runoff modeling in a Hierarchical Mixtures of Experts framework. Geophysical Research Letters, 2007, 34, .	4.0	4
82	Calibrating hydrologic models in flow-corrected time. Water Resources Research, 2014, 50, 748-753.	4.2	4
83	A quantitative approach for integrating multiple lines of evidence for the evaluation of environmental health risks. PeerJ, 2015, 3, e730.	2.0	4
84	Incorporating multiple observational uncertainties in water quality model calibration. Hydrological Processes, 2022, 36, .	2.6	4
85	Modelling daily transmission losses in basinâ€scale river system models under changing hydrological regimes. Hydrological Processes, 2022, 36, .	2.6	3
86	Simulation of streamflow and instream loads of total suspended solids and nitrate in a large transboundary river basin using Source model and geospatial analysis. Science of the Total Environment, 2020, 744, 140656.	8.0	2
87	Functional models for longitudinal data with covariate dependent smoothness. Electronic Journal of Statistics, 2016, 10, .	0.7	1
88	Daily time series of river water levels derived from a seasonal linear model using multisource satellite products under uncertainty. Journal of Hydrology, 2021, 602, 126783.	5.4	1
89	Modelling and understanding the hierarchy in a mixture of experts using multiple catchment descriptors. Journal of Hydrology, 2013, 507, 273-286.	5.4	0
90	A conceptual model for simulating streamflow in a changing snow-covered catchment: application to the data-sparse upper Brahmaputra River basin. Hydrological Sciences Journal, 2022, 67, 1669-1682.	2.6	0