

# Lucy A Marshall

## List of Publications by Year in descending order

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90  
papers

2,996  
citations

185998

28  
h-index

182168

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 reach- and plot-scale understanding to the catchment scale. <i>Water Resources Research</i> , 2009, 45, .	1.7	430
2	A comparative study of Markov chain Monte Carlo methods for conceptual rainfall-runoff modeling. <i>Water Resources Research</i> , 2004, 40, .	1.7	193
3	Investigating controls on the thermal sensitivity of Pennsylvania streams. <i>Hydrological Processes</i> , 2012, 26, 771-785.	1.1	162
4	Object-oriented crop classification using multitemporal ETM+ SLC-off imagery and random forest. <i>GIScience and Remote Sensing</i> , 2013, 50, 418-436.	2.4	88
5	Modeling residual hydrologic errors with Bayesian inference. <i>Journal of Hydrology</i> , 2015, 528, 29-37.	2.3	88
6	Development of a formal likelihood function for improved Bayesian inference of ephemeral catchments. <i>Water Resources Research</i> , 2010, 46, .	1.7	83
7	Hydrological model selection: A Bayesian alternative. <i>Water Resources Research</i> , 2005, 41, .	1.7	78
8	Landscape structure and climate influences on hydrologic response. <i>Water Resources Research</i> , 2011, 47, .	1.7	76
9	Hydrologic modeling in dynamic catchments: A data assimilation approach. <i>Water Resources Research</i> , 2016, 52, 3350-3372.	1.7	76
10	Towards dynamic catchment modelling: a Bayesian hierarchical mixtures of experts framework. <i>Hydrological Processes</i> , 2007, 21, 847-861.	1.1	73
11	ESTIMATING THERMAL REGIMES OF BULL TROUT AND ASSESSING THE POTENTIAL EFFECTS OF CLIMATE WARMING ON CRITICAL HABITATS. <i>River Research and Applications</i> , 2014, 30, 204-216.	0.7	68
12	Data-Driven Model Uncertainty Estimation in Hydrologic Data Assimilation. <i>Water Resources Research</i> , 2018, 54, 1252-1280.	1.7	64
13	Detecting non-stationary hydrologic model parameters in a paired catchment system using data assimilation. <i>Advances in Water Resources</i> , 2016, 94, 103-119.	1.7	57
14	Modeling the catchment via mixtures: Issues of model specification and validation. <i>Water Resources Research</i> , 2006, 42, .	1.7	55
15	Generalized likelihood uncertainty estimation (GLUE) and approximate Bayesian computation: What's the connection?. <i>Water Resources Research</i> , 2012, 48, .	1.7	55
16	Modeling Water Quality in Watersheds: From Here to the Next Generation. <i>Water Resources Research</i> , 2020, 56, e2020WR027721.	1.7	54
17	Revisiting Pan Evaporation Trends in Australia a Decade on. <i>Geophysical Research Letters</i> , 2018, 45, 11,164.	1.5	53
18	Bayesian calibration and uncertainty analysis of hydrological models: A comparison of adaptive Metropolis and sequential Monte Carlo samplers. <i>Water Resources Research</i> , 2011, 47, .	1.7	49

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19	Calibrating and assessing uncertainty in coastal numerical models. <i>Coastal Engineering</i> , 2017, 125, 28-41.	1.7	43
20	A method for combining SRTM DEM and ASTER GDEM2 to improve topography estimation in regions without reference data. <i>Remote Sensing of Environment</i> , 2018, 210, 229-241.	4.6	43
21	Bayesian Networks in coastal engineering: Distinguishing descriptive and predictive applications. <i>Coastal Engineering</i> , 2018, 135, 16-30.	1.7	42
22	Taking the pulse of hydrology education. <i>Hydrological Processes</i> , 2007, 21, 1789-1792.	1.1	40
23	Efficient hydrological model parameter optimization with Sequential Monte Carlo sampling. <i>Environmental Modelling and Software</i> , 2012, 38, 283-295.	1.9	38
24	Implications of future climate change for event-based hydrologic models. <i>Advances in Water Resources</i> , 2018, 119, 95-110.	1.7	37
25	Exploring uncertainty and model predictive performance concepts via a modular snowmelt-runoff modeling framework. <i>Environmental Modelling and Software</i> , 2010, 25, 691-701.	1.9	34
26	It takes a community to raise a hydrologist: the Modular Curriculum for Hydrologic Advancement (MOCHA). <i>Hydrology and Earth System Sciences</i> , 2012, 16, 3405-3418.	1.9	31
27	Approximate Bayesian Computation and Bayes <sup>™</sup> Linear Analysis: Toward High-Dimensional ABC. <i>Journal of Computational and Graphical Statistics</i> , 2014, 23, 65-86.	0.9	31
28	Time-varying parameter models for catchments with land use change: the importance of model structure. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 2903-2919.	1.9	31
29	Using field data to inform and evaluate a new model of catchment hydrologic connectivity. <i>Water Resources Research</i> , 2013, 49, 6834-6846.	1.7	30
30	A comparison of methods for discretizing continuous variables in Bayesian Networks. <i>Environmental Modelling and Software</i> , 2018, 108, 61-66.	1.9	30
31	Assessing the Potential Robustness of Conceptual Rainfall <sup>€</sup> Runoff Models Under a Changing Climate. <i>Water Resources Research</i> , 2018, 54, 5030-5049.	1.7	29
32	Bayesian LSTM With Stochastic Variational Inference for Estimating Model Uncertainty in Process <sup>€</sup> Based Hydrological Models. <i>Water Resources Research</i> , 2021, 57, e2021WR029772.	1.7	29
33	Quantifying watershed sensitivity to spatially variable N loading and the relative importance of watershed N retention mechanisms. <i>Water Resources Research</i> , 2011, 47, .	1.7	28
34	Landscape changes and their hydrologic effects: Interactions and feedbacks across scales. <i>Earth-Science Reviews</i> , 2021, 212, 103466.	4.0	27
35	A watershed <sup>€</sup> scale assessment of a process soil CO <sub>2</sub> production and efflux model. <i>Water Resources Research</i> , 2011, 47, .	1.7	26
36	Deriving daily water levels from satellite altimetry and land surface temperature for sparsely gauged catchments: A case study for the Mekong River. <i>Remote Sensing of Environment</i> , 2018, 212, 31-46.	4.6	26

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37	Fire and flood expand the floodplain shifting habitat mosaic concept. <i>Freshwater Science</i> , 2015, 34, 1366-1382.	0.9	25
38	Is Past Variability a Suitable Proxy for Future Change? A Virtual Catchment Experiment. <i>Water Resources Research</i> , 2020, 56, e2019WR026275.	1.7	22
39	Characterizing distributed hydrological model residual errors using a probabilistic long short-term memory network. <i>Journal of Hydrology</i> , 2021, 603, 126888.	2.3	22
40	A Bayesian method for multi-pollution source water quality model and seasonal water quality management in river segments. <i>Environmental Modelling and Software</i> , 2014, 57, 216-226.	1.9	21
41	Investigating strategies to improve hydrologic model performance in a changing climate. <i>Journal of Hydrology</i> , 2019, 579, 124219.	2.3	21
42	Environmental fate model for ultra-low-volume insecticide applications used for adult mosquito management. <i>Science of the Total Environment</i> , 2012, 438, 72-79.	3.9	20
43	Coevolution of machine learning and process-based modelling to revolutionize Earth and environmental sciences: A perspective. <i>Hydrological Processes</i> , 2022, 36, .	1.1	20
44	Changes in field-level cropping sequences: Indicators of shifting agricultural practices. <i>Agriculture, Ecosystems and Environment</i> , 2014, 189, 11-20.	2.5	19
45	Predicting hydrologic response through a hierarchical catchment knowledgebase: A Bayes empirical Bayes approach. <i>Water Resources Research</i> , 2014, 50, 1189-1204.	1.7	19
46	Tools for investigating the prior distribution in Bayesian hydrology. <i>Journal of Hydrology</i> , 2016, 538, 551-562.	2.3	19
47	Specifying a hierarchical mixture of experts for hydrologic modeling: Gating function variable selection. <i>Water Resources Research</i> , 2013, 49, 2926-2939.	1.7	18
48	Spatial Heterogeneity of Snow Density and Its Influence on Snow Water Equivalence Estimates in a Large Mountainous Basin. <i>Hydrology</i> , 2016, 3, 3.	1.3	18
49	A Bayesian alternative for multi-objective ecohydrological model specification. <i>Journal of Hydrology</i> , 2018, 556, 25-38.	2.3	18
50	Using 3D robust smoothing to fill land surface temperature gaps at the continental scale. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2019, 82, 101879.	1.4	18
51	The influence of data transformations in simulating Total Suspended Solids using Bayesian inference. <i>Environmental Modelling and Software</i> , 2019, 121, 104493.	1.9	17
52	Adoption of cropping sequences in northeast Montana: A spatio-temporal analysis. <i>Agriculture, Ecosystems and Environment</i> , 2014, 197, 77-87.	2.5	15
53	Projected warming portends seasonal shifts of stream temperatures in the Crown of the Continent Ecosystem, USA and Canada. <i>Climatic Change</i> , 2017, 144, 641-655.	1.7	15
54	Quantifying input error in hydrologic modeling using the Bayesian error analysis with reordering (BEAR) approach. <i>Journal of Hydrology</i> , 2021, 598, 126202.	2.3	14

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55	A coupled metabolic-hydraulic model and calibration scheme for estimating whole-river metabolism during dynamic flow conditions. <i>Limnology and Oceanography: Methods</i> , 2017, 15, 847-866.	1.0	13
56	Insights on the impact of systematic model errors on data assimilation performance in changing catchments. <i>Advances in Water Resources</i> , 2018, 113, 202-222.	1.7	13
57	Hydrologic multi-model ensemble predictions using variational Bayesian deep learning. <i>Journal of Hydrology</i> , 2022, 604, 127221.	2.3	13
58	Creativity, Uncertainty, and Automated Model Building. <i>Ground Water</i> , 2017, 55, 693-697.	0.7	12
59	Modelling precipitation uncertainties in a multi-objective Bayesian ecohydrological setting. <i>Advances in Water Resources</i> , 2019, 123, 12-22.	1.7	12
60	The ensemble Kalman filter is an ABC algorithm. <i>Statistics and Computing</i> , 2012, 22, 1273-1276.	0.8	11
61	Characterising uncertainty in precipitation downscaling using a Bayesian approach. <i>Advances in Water Resources</i> , 2019, 129, 189-197.	1.7	11
62	Linking Changes in Land Cover and Land Use of the Lower Mekong Basin to Instream Nitrate and Total Suspended Solids Variations. <i>Sustainability</i> , 2020, 12, 2992.	1.6	11
63	Modelling climate change impacts on the Brahmaputra streamflow resulting from changes in snowpack attributes. <i>Journal of Hydrology</i> , 2021, 603, 126998.	2.3	11
64	A metric for attributing variability in modelled streamflows. <i>Journal of Hydrology</i> , 2016, 541, 1475-1487.	2.3	10
65	Quantifying the Effects of Sea Level Rise on Estuarine Drainage Systems. <i>Water Resources Research</i> , 2022, 58, .	1.7	10
66	A Beta Regression Model for Improved Solar Radiation Predictions. <i>Journal of Applied Meteorology and Climatology</i> , 2013, 52, 1923-1938.	0.6	9
67	Diagnostic calibration and cross-catchment transferability of a simple process-consistent hydrologic model. <i>Hydrological Processes</i> , 2016, 30, 5027-5038.	1.1	9
68	Projected Changes in the Tibetan Plateau Snowpack Resulting From Rising Global Temperatures. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	1.2	9
69	Typecasting catchments: Classification, directionality, and the pursuit of universality. <i>Advances in Water Resources</i> , 2018, 112, 245-253.	1.7	8
70	Attributing uncertainty in streamflow simulations due to variable inputs via the Quantile Flow Deviation metric. <i>Advances in Water Resources</i> , 2018, 116, 40-55.	1.7	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. <i>Journal of Hydrology: Regional Studies</i> , 2019, 24, 100605.	1.0	7
72	Ecohydrologic Error Models for Improved Bayesian Inference in Remotely Sensed Catchments. <i>Water Resources Research</i> , 2019, 55, 4533-4549.	1.7	7

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73	Bayesian Model Calibration Using Surrogate Streamflow in Ungauged Catchments. <i>Water Resources Research</i> , 2022, 58, .	1.7	7
74	Assessing Goodness of Fit for Verifying Probabilistic Forecasts. <i>Forecasting</i> , 2021, 3, 763-773.	1.6	6
75	Mixtures of experts for understanding model discrepancy in dynamic computer models. <i>Computational Statistics and Data Analysis</i> , 2014, 71, 491-505.	0.7	5
76	Jointly Calibrating Hydrologic Model Parameters and State Adjustments. <i>Water Resources Research</i> , 2021, 57, e2020WR028499.	1.7	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. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2021, 59, 7285-7295.	2.7	5
78	Transboundary river basins: Scenarios of hydropower development and operation under extreme climate conditions. <i>Science of the Total Environment</i> , 2022, 803, 149828.	3.9	5
79	Quantifying input uncertainty in the calibration of water quality models: reordering errors via the secant method. <i>Hydrology and Earth System Sciences</i> , 2022, 26, 1203-1221.	1.9	5
80	Which Rainfall Errors Can Hydrologic Models Handle? Implications for Using Satellite-Derived Products in Sparsely Gauged Catchments. <i>Water Resources Research</i> , 2022, 58, .	1.7	5
81	A single model ensemble versus a dynamic modeling platform: Semi-distributed rainfall runoff modeling in a Hierarchical Mixtures of Experts framework. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	4
82	Calibrating hydrologic models in flow-corrected time. <i>Water Resources Research</i> , 2014, 50, 748-753.	1.7	4
83	A quantitative approach for integrating multiple lines of evidence for the evaluation of environmental health risks. <i>PeerJ</i> , 2015, 3, e730.	0.9	4
84	Incorporating multiple observational uncertainties in water quality model calibration. <i>Hydrological Processes</i> , 2022, 36, .	1.1	4
85	Modelling daily transmission losses in basin-scale river system models under changing hydrological regimes. <i>Hydrological Processes</i> , 2022, 36, .	1.1	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. <i>Science of the Total Environment</i> , 2020, 744, 140656.	3.9	2
87	Functional models for longitudinal data with covariate dependent smoothness. <i>Electronic Journal of Statistics</i> , 2016, 10, .	0.4	1
88	Daily time series of river water levels derived from a seasonal linear model using multisource satellite products under uncertainty. <i>Journal of Hydrology</i> , 2021, 602, 126783.	2.3	1
89	Modelling and understanding the hierarchy in a mixture of experts using multiple catchment descriptors. <i>Journal of Hydrology</i> , 2013, 507, 273-286.	2.3	0
90	A conceptual model for simulating streamflow in a changing snow-covered catchment: application to the data-sparse upper Brahmaputra River basin. <i>Hydrological Sciences Journal</i> , 2022, 67, 1669-1682.	1.2	0