

# George Kuczera

## List of Publications by Year in descending order

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Version: 2024-02-01

116  
papers

7,339  
citations

61984

43  
h-index

56724

83  
g-index

118  
all docs

118  
docs citations

118  
times ranked

4496  
citing authors

#	ARTICLE	IF	CITATIONS
1	And we thought the Millennium Drought was bad: Assessing climate variability and change impacts on an Australian dryland wetland using an ecohydrologic emulator. <i>Water Research</i> , 2022, 218, 118487.	11.3	3
2	Stochastic Generation of Future Hydroclimate Using Temperature as a Climate Change Covariate. <i>Water Resources Research</i> , 2021, 57, 2020WR027331.	4.2	13
3	Improving the Reliability of Sub-Seasonal Forecasts of High and Low Flows by Using a Flow-Dependent Nonparametric Model. <i>Water Resources Research</i> , 2021, 57, e2020WR029317.	4.2	7
4	Multi-temporal Hydrological Residual Error Modeling for Seamless Subseasonal Streamflow Forecasting. <i>Water Resources Research</i> , 2020, 56, e2019WR026979.	4.2	21
5	Resilience to drought of dryland wetlands threatened by climate change. <i>Scientific Reports</i> , 2020, 10, 13232.	3.3	37
6	Patch organization and resilience of dryland wetlands. <i>Science of the Total Environment</i> , 2020, 726, 138581.	8.0	10
7	Benefits of Explicit Treatment of Zero Flows in Probabilistic Hydrological Modeling of Ephemeral Catchments. <i>Water Resources Research</i> , 2019, 55, 11035-11060.	4.2	13
8	Detecting inundation thresholds for dryland wetland vulnerability. <i>Advances in Water Resources</i> , 2019, 128, 168-182.	3.8	19
9	Spatial variation of correlations between vertical soil water and evapotranspiration and their controlling factors in a semi-arid region. <i>Journal of Hydrology</i> , 2019, 574, 53-63.	5.4	80
10	Top-down seasonal streamflow model with spatiotemporal forest sapwood area. <i>Journal of Hydrology</i> , 2019, 568, 372-384.	5.4	5
11	Using paleoclimate reconstructions to analyse hydrological epochs associated with Pacific decadal variability. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 6399-6414.	4.9	4
12	Evaluating post-processing approaches for monthly and seasonal streamflow forecasts. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 6257-6278.	4.9	34
13	The Importance of Spatiotemporal Variability in Irrigation Inputs for Hydrological Modeling of Irrigated Catchments. <i>Water Resources Research</i> , 2018, 54, 6792-6821.	4.2	21
14	Hydroclimatic response of evapotranspiration partitioning to prolonged droughts in semiarid grassland. <i>Journal of Hydrology</i> , 2018, 563, 766-777.	5.4	80
15	A simplified approach to produce probabilistic hydrological model predictions. <i>Environmental Modelling and Software</i> , 2018, 109, 306-314.	4.5	25
16	The Fast and the Robust: Trade-Offs Between Optimization Robustness and Cost in the Calibration of Environmental Models. <i>Water Resources Research</i> , 2018, 54, 9432-9455.	4.2	15
17	A Robust Gauss-Newton Algorithm for the Optimization of Hydrological Models: From Standard Gauss-Newton to Robust Gauss-Newton. <i>Water Resources Research</i> , 2018, 54, 9655-9683.	4.2	24
18	A Robust Gauss-Newton Algorithm for the Optimization of Hydrological Models: Benchmarking Against Industry-Standard Algorithms. <i>Water Resources Research</i> , 2018, 54, 9637-9654.	4.2	26

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19	Improving probabilistic prediction of daily streamflow by identifying optimal approaches for modeling heteroscedastic residual errors. <i>Water Resources Research</i> , 2017, 53, 2199-2239.	4.2	101
20	Impact of hydroclimate parameter uncertainty on system yield. <i>Australian Journal of Water Resources</i> , 2017, 21, 53-62.	2.7	7
21	Development and evaluation of a stochastic daily rainfall model with long-term variability. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 6541-6558.	4.9	15
22	ARR, Hinc Quo?. <i>Australian Journal of Water Resources</i> , 2016, 20, 108-131.	2.7	5
23	Comparison of Newton-type and SCE optimisation algorithms for the calibration of conceptual hydrological models. <i>Australian Journal of Water Resources</i> , 2016, 20, 169-176.	2.7	7
24	Estimating tree and stand sapwood area in spatially heterogeneous southeastern Australian forests. <i>Journal of Plant Ecology</i> , 2016, 9, 272-284.	2.3	15
25	Case study on the use of dynamically downscaled climate model data for assessing water security in the Lower Hunter region of the eastern seaboard of Australia. <i>Journal of Southern Hemisphere Earth Systems Science</i> , 2016, 66, 177-202.	1.8	2
26	Regionalisation of the parameters of the log-Pearson 3 distribution: a case study for New South Wales, Australia. <i>Hydrological Processes</i> , 2015, 29, 250-260.	2.6	29
27	Use of a forest sapwood area index to explain long-term variability in mean annual evapotranspiration and streamflow in moist eucalypt forests. <i>Water Resources Research</i> , 2015, 51, 5318-5331.	4.2	24
28	Using Tree Detection Algorithms to Predict Stand Sapwood Area, Basal Area and Stocking Density in <i>Eucalyptus regnans</i> Forest. <i>Remote Sensing</i> , 2015, 7, 7298-7323.	4.0	15
29	Comparing three methods to form regions for design rainfall statistics: Two case studies in Australia. <i>Journal of Hydrology</i> , 2015, 527, 62-76.	5.4	17
30	Efficient multi-objective optimization methods for computationally intensive urban water resources models. <i>Journal of Hydroinformatics</i> , 2015, 17, 36-55.	2.4	8
31	Robust optimization to secure urban bulk water supply against extreme drought and uncertain climate change. <i>Environmental Modelling and Software</i> , 2015, 69, 437-451.	4.5	74
32	A new method for measuring stand sapwood area in forests. <i>Ecohydrology</i> , 2015, 8, 504-517.	2.4	7
33	Comparison of joint versus postprocessor approaches for hydrological uncertainty estimation accounting for error autocorrelation and heteroscedasticity. <i>Water Resources Research</i> , 2014, 50, 2350-2375.	4.2	130
34	An efficient causative event-based approach for deriving the annual flood frequency distribution. <i>Journal of Hydrology</i> , 2014, 510, 412-423.	5.4	32
35	Application of multiobjective optimization to scheduling capacity expansion of urban water resource systems. <i>Water Resources Research</i> , 2014, 50, 4624-4642.	4.2	46
36	Application of Multi-Objective Optimization for Urban Water Resource Systems in Presence of Climate Change., 2013, , .		1

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37	Pitfalls and improvements in the joint inference of heteroscedasticity and autocorrelation in hydrological model calibration. <i>Water Resources Research</i> , 2013, 49, 4518-4524.	4.2	96
38	Climate driver informed short-term drought risk evaluation. <i>Water Resources Research</i> , 2013, 49, 2317-2326.	4.2	23
39	Multiobjective optimization of urban water resources: Moving toward more practical solutions. <i>Water Resources Research</i> , 2012, 48, .	4.2	53
40	Climate-informed stochastic hydrological modeling: Incorporating decadal-scale variability using paleo data. <i>Water Resources Research</i> , 2011, 47, .	4.2	38
41	Toward a reliable decomposition of predictive uncertainty in hydrological modeling: Characterizing rainfall errors using conditional simulation. <i>Water Resources Research</i> , 2011, 47, .	4.2	172
42	Comment on Wood et al. 2008, 'Impacts of fire on forest age and runoff in mountain ash forests'. <i>Functional Plant Biology</i> , 2010, 37, 1187.	2.1	2
43	Generating synthetic high resolution rainfall time series at sites with only daily rainfall using a master-target scaling approach. <i>Journal of Hydrology</i> , 2010, 393, 163-173.	5.4	14
44	There are no hydrological monsters, just models and observations with large uncertainties!. <i>Hydrological Sciences Journal</i> , 2010, 55, 980-991.	2.6	68
45	Understanding predictive uncertainty in hydrologic modeling: The challenge of identifying input and structural errors. <i>Water Resources Research</i> , 2010, 46, .	4.2	589
46	A limited-memory acceleration strategy for MCMC sampling in hierarchical Bayesian calibration of hydrological models. <i>Water Resources Research</i> , 2010, 46, .	4.2	32
47	A SIMPLE METHOD FOR INCORPORATING PARAMETER UNCERTAINTY IN STOCHASTIC DATA GENERATION. , 2010, , 53-64.		0
48	IMPACT OF ERROR COVARIANCE ON FLOOD FORECASTING USING ENSEMBLE KALMAN FILTER. , 2010, , 251-263.		0
49	SHORT-TERM RAINFALL FORECASTING USING A BAYESIAN STOCHASTIC RAINFALL BURST MODEL. , 2010, , 11-22.		0
50	Critical evaluation of parameter consistency and predictive uncertainty in hydrological modeling: A case study using Bayesian total error analysis. <i>Water Resources Research</i> , 2009, 45, .	4.2	293
51	Combining site and regional flood information using a Bayesian Monte Carlo approach. <i>Water Resources Research</i> , 2009, 45, .	4.2	40
52	Assessment of the Replicate Compression Heuristic to Improve Efficiency of Urban Water Supply Headworks Optimization. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2009, 135, 451-457.	2.6	0
53	Comment on "An integrated hydrologic Bayesian multimodel combination framework: Confronting input, parameter, and model structural uncertainty in hydrologic prediction" by Newsha K. Ajami et al.. <i>Water Resources Research</i> , 2009, 45, .	4.2	17
54	Investigating the Impact of Predictive Uncertainty in Rainfall-Runoff Modelling on Storage Reliability Estimates Using Bayesian Total Error Analysis. , 2008, , .		0

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55	Scrutinizing Parameter Consistency and Predictive Uncertainty in Rainfall-Runoff Models Using Bayesian Total Error Analysis. , 2008, , .		1
56	A general Bayesian framework for calibrating and evaluating stochastic models of annual multi-site hydrological data. Journal of Hydrology, 2007, 340, 129-148.	5.4	28
57	Model smoothing strategies to remove microscale discontinuities and spurious secondary optima in objective functions in hydrological calibration. Water Resources Research, 2007, 43, .	4.2	86
58	Multiple criteria decision making: Facilitating a learning environment. Journal of Environmental Planning and Management, 2006, 49, 455-470.	4.5	6
59	Bayesian analysis of input uncertainty in hydrological modeling: 1. Theory. Water Resources Research, 2006, 42, .	4.2	318
60	Bayesian analysis of input uncertainty in hydrological modeling: 2. Application. Water Resources Research, 2006, 42, .	4.2	193
61	Calibration of conceptual hydrological models revisited: 1. Overcoming numerical artefacts. Journal of Hydrology, 2006, 320, 173-186.	5.4	101
62	Calibration of conceptual hydrological models revisited: 2. Improving optimisation and analysis. Journal of Hydrology, 2006, 320, 187-201.	5.4	55
63	Multidecadal variability in coastal eastern Australian flood data. Journal of Hydrology, 2006, 327, 219-225.	5.4	72
64	Parameter estimation and model identification for stochastic models of annual hydrological data: Is the observed record long enough?. Journal of Hydrology, 2006, 330, 313-328.	5.4	27
65	Towards a Bayesian total error analysis of conceptual rainfall-runoff models: Characterising model error using storm-dependent parameters. Journal of Hydrology, 2006, 331, 161-177.	5.4	283
66	Joint probability and design storms at the crossroads. Australian Journal of Water Resources, 2006, 10, 63-79.	2.7	32
67	Optimizing water supply headworks operating rules under stochastic inputs: Assessment of genetic algorithm performance. Water Resources Research, 2005, 41, .	4.2	20
68	Flood frequency censoring errors associated with daily-read flood observations. Water Resources Research, 2005, 41, .	4.2	4
69	Development of Non-Homogeneous and Hierarchical Hidden Markov Models for Modelling Monthly Rainfall and Streamflow Time Series. , 2004, , 1.		1
70	Optimizing Urban Water Supply Headworks Using Probabilistic Search Methods. Journal of Water Resources Planning and Management - ASCE, 2003, 129, 380-387.	2.6	25
71	Multi-decadal variability of flood risk. Geophysical Research Letters, 2003, 30, .	4.0	259
72	Semidistributed hydrological modeling: A saturation path perspective on TOPMODEL and VIC. Water Resources Research, 2003, 39, .	4.2	53

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73	A hidden Markov model for modelling long-term persistence in multi-site rainfall time series. 2. Real data analysis. <i>Journal of Hydrology</i> , 2003, 275, 27-48.	5.4	42
74	A hidden Markov model for modelling long-term persistence in multi-site rainfall time series 1. Model calibration using a Bayesian approach. <i>Journal of Hydrology</i> , 2003, 275, 12-26.	5.4	52
75	Overcoming the joint probability problem associated with initial loss estimation in design flood estimation. <i>Australian Journal of Water Resources</i> , 2003, 7, 101-109.	2.7	12
76	Confronting input uncertainty in environmental modelling. <i>Water Science and Application</i> , 2003, , 49-68.	0.3	126
77	The impact of rainwater tanks in the Upper Parramatta River Catchment. <i>Australian Journal of Water Resources</i> , 2003, 7, 121-129.	2.7	5
78	Incorporating Long-Term Climate Variability into a Short-Timescale Rainfall Model Using a Hidden State Markov Model. <i>Australian Journal of Water Resources</i> , 2002, 6, 63-70.	2.7	1
79	Flood frequency analysis: Evidence and implications of secular climate variability, New South Wales. <i>Water Resources Research</i> , 2002, 38, 20-1-20-7.	4.2	107
80	Quantifying parameter uncertainty in stochastic models using the Box-Cox transformation. <i>Journal of Hydrology</i> , 2002, 265, 246-257.	5.4	74
81	An evaluation of the benefits of source control measures at the regional scale. <i>Urban Water</i> , 2002, 4, 307-320.	0.5	67
82	A point rainfall model for risk-based design. <i>Journal of Hydrology</i> , 2001, 247, 54-71.	5.4	67
83	Parameterisation of a simple semi-distributed model for assessing the impact of land-use on hydrologic response. <i>Journal of Hydrology</i> , 2001, 254, 16-32.	5.4	55
84	Modeling long-term persistence in hydroclimatic time series using a hidden state Markov Model. <i>Water Resources Research</i> , 2000, 36, 3301-3310.	4.2	77
85	Probabilistic optimization for conceptual rainfall-runoff models: A comparison of the shuffled complex evolution and simulated annealing algorithms. <i>Water Resources Research</i> , 1999, 35, 767-773.	4.2	138
86	Comprehensive at-site flood frequency analysis using Monte Carlo Bayesian inference. <i>Water Resources Research</i> , 1999, 35, 1551-1557.	4.2	145
87	Monte Carlo assessment of parameter uncertainty in conceptual catchment models: the Metropolis algorithm. <i>Journal of Hydrology</i> , 1998, 211, 69-85.	5.4	631
88	Seasonal generalized exponential probability models with application to interstorm and storm durations. <i>Water Resources Research</i> , 1998, 34, 143-148.	4.2	11
89	Assessment of hydrologic parameter uncertainty and the worth of multiresponse data. <i>Water Resources Research</i> , 1998, 34, 1481-1489.	4.2	207
90	The quest for more powerful validation of conceptual catchment models. <i>Water Resources Research</i> , 1997, 33, 2325-2335.	4.2	117

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91	Efficient subspace probabilistic parameter optimization for catchment models. <i>Water Resources Research</i> , 1997, 33, 177-185.	4.2	167
92	Correlated Rating Curve Error in Flood Frequency Inference. <i>Water Resources Research</i> , 1996, 32, 2119-2127.	4.2	76
93	Generalized Headworks Simulation Modelling: The Australian Experience. <i>Water Science and Technology Library</i> , 1996, , 121-142.	0.3	0
94	Estimation of subgrid scale kinematic wave parameters for hillslopes. <i>Hydrological Processes</i> , 1995, 9, 469-482.	2.6	10
95	Network Linear Programming Codes for Water Supply Headworks Modeling. <i>Journal of Water Resources Planning and Management - ASCE</i> , 1993, 119, 412-417.	2.6	18
96	Incorporating demand uncertainty in water supply headworks simulation. <i>Water Resources Research</i> , 1993, 29, 469-477.	4.2	10
97	Uncorrelated measurement error in flood frequency inference. <i>Water Resources Research</i> , 1992, 28, 183-188.	4.2	34
98	Effect of rainfall errors on accuracy of design flood estimates. <i>Water Resources Research</i> , 1992, 28, 1145-1153.	4.2	25
99	Water supply headworks simulation using network linear programming. <i>Advances in Engineering Software</i> , 1992, 14, 55-60.	3.8	41
100	Estimation of runoff-routing model parameters using incompatible storm data. <i>Journal of Hydrology</i> , 1990, 114, 47-60.	5.4	19
101	Assessing hydrologic model nonlinearity using response surface plots. <i>Journal of Hydrology</i> , 1990, 118, 143-161.	5.4	16
102	An application of Bayesian nonlinear regression to hydrologic models. <i>Advances in Engineering Software</i> (1978), 1989, 11, 149-155.	0.1	11
103	Fast multireservoir multiperiod linear programming models. <i>Water Resources Research</i> , 1989, 25, 169-176.	4.2	33
104	Bushfire hydrology – The case of leaking watersheds – Comment. <i>Journal of Hydrology</i> , 1989, 106, 377-380.	5.4	2
105	On the validity of first-order prediction limits for conceptual hydrologic models. <i>Journal of Hydrology</i> , 1988, 103, 229-247.	5.4	40
106	General Water Supply System Simulation Model: WASP. <i>Journal of Water Resources Planning and Management - ASCE</i> , 1988, 114, 365-382.	2.6	57
107	On maximum likelihood estimators for the multisite lag-one streamflow model: Complete and incomplete data cases. <i>Water Resources Research</i> , 1987, 23, 641-645.	4.2	17
108	Prediction of water yield reductions following a bushfire in ash-mixed species eucalypt forest. <i>Journal of Hydrology</i> , 1987, 94, 215-236.	5.4	210

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109	Reply [to "Comment on "A Bayesian surrogate for regional skew in flood frequency analysis"™ by George Kuczera"]. Water Resources Research, 1984, 20, 1929-1930.	4.2	0
110	A Bayesian surrogate for regional skew in flood frequency analysis. Water Resources Research, 1983, 19, 821-832.	4.2	18
111	Improved parameter inference in catchment models: 1. Evaluating parameter uncertainty. Water Resources Research, 1983, 19, 1151-1162.	4.2	238
112	Improved parameter inference in catchment models: 2. Combining different kinds of hydrologic data and testing their compatibility. Water Resources Research, 1983, 19, 1163-1172.	4.2	81
113	Effect of sampling uncertainty and spatial correlation on an empirical Bayes procedure for combining site and regional information. Journal of Hydrology, 1983, 65, 373-398.	5.4	32
114	On the relationship between the reliability of parameter estimates and hydrologic time series data used in calibration. Water Resources Research, 1982, 18, 146-154.	4.2	60
115	Combining site-specific and regional information: An empirical Bayes Approach. Water Resources Research, 1982, 18, 306-314.	4.2	110
116	Robust flood frequency models. Water Resources Research, 1982, 18, 315-324.	4.2	102