

Keith Beven

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305
papers

31,705
citations

83
h-index

173
g-index

355
ext. papers

34,524
ext. citations

4.4
avg, IF

7.83
L-index

#	Paper	IF	Citations
305	The future of distributed models: Model calibration and uncertainty prediction. <i>Hydrological Processes</i> , 1992 , 6, 279-298	3.3	2986
304	Macropores and water flow in soils. <i>Water Resources Research</i> , 1982 , 18, 1311-1325	5.4	1795
303	A manifesto for the equifinality thesis. <i>Journal of Hydrology</i> , 2006 , 320, 18-36	6	1539
302	Equifinality, data assimilation, and uncertainty estimation in mechanistic modelling of complex environmental systems using the GLUE methodology. <i>Journal of Hydrology</i> , 2001 , 249, 11-29	6	1485
301	Changing ideas in hydrology – The case of physically-based models. <i>Journal of Hydrology</i> , 1989 , 105, 157-172	6	1140
300	The prediction of hillslope flow paths for distributed hydrological modelling using digital terrain models. <i>Hydrological Processes</i> , 1991 , 5, 59-79	3.3	1001
299	Prophecy, reality and uncertainty in distributed hydrological modelling. <i>Advances in Water Resources</i> , 1993 , 16, 41-51	4.7	825
298	Sensitivity analysis of environmental models: A systematic review with practical workflow. <i>Environmental Modelling and Software</i> , 2016 , 79, 214-232	5.2	634
297	Bayesian Estimation of Uncertainty in Runoff Prediction and the Value of Data: An Application of the GLUE Approach. <i>Water Resources Research</i> , 1996 , 32, 2161-2173	5.4	570
296	Effects of spatial variability and scale with implications to hydrologic modeling. <i>Journal of Hydrology</i> , 1988 , 102, 29-47	6	492
295	Macropores and water flow in soils revisited. <i>Water Resources Research</i> , 2013 , 49, 3071-3092	5.4	486
294	Banta Rhei – Everything Flows – Change in hydrology and society – The IAHS Scientific Decade 2013–2022. <i>Hydrological Sciences Journal</i> , 2013 , 58, 1256-1275	3.5	452
293	How far can we go in distributed hydrological modelling?. <i>Hydrology and Earth System Sciences</i> , 2001 , 5, 1-12	5.5	448
292	TOPMODEL: A critique. <i>Hydrological Processes</i> , 1997 , 11, 1069-1085	3.3	397
291	2012 ,		344
290	On hydrologic similarity: 2. A scaled model of storm runoff production. <i>Water Resources Research</i> , 1987 , 23, 2266-2278	5.4	327
289	Uncertainty in the calibration of effective roughness parameters in HEC-RAS using inundation and downstream level observations. <i>Journal of Hydrology</i> , 2005 , 302, 46-69	6	307

288	Quantifying contributions to storm runoff through end-member mixing analysis and hydrologic measurements at the Panola Mountain Research Watershed (Georgia, USA). <i>Hydrological Processes</i> , 2001 , 15, 1903-1924	3.3	278
287	Towards a coherent philosophy for modelling the environment. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2002 , 458, 2465-2484	2.4	278
286	Debates on the future of hydrological sciences: A (common) path forward? A call to action aimed at understanding velocities, celerities and residence time distributions of the headwater hydrograph. <i>Water Resources Research</i> , 2014 , 50, 5342-5350	5.4	271
285	Influence of uncertain boundary conditions and model structure on flood inundation predictions. <i>Advances in Water Resources</i> , 2006 , 29, 1430-1449	4.7	266
284	Towards an alternative blueprint for a physically based digitally simulated hydrologic response modelling system. <i>Hydrological Processes</i> , 2002 , 16, 189-206	3.3	262
283	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019 , 64, 1141-1158	3.5	259
282	A dynamic TOPMODEL. <i>Hydrological Processes</i> , 2001 , 15, 1993-2011	3.3	252
281	Catchment geomorphology and the dynamics of runoff contributing areas. <i>Journal of Hydrology</i> , 1983 , 65, 139-158	6	231
280	Toward a Generalization of the TOPMODEL Concepts: Topographic Indices of Hydrological Similarity. <i>Water Resources Research</i> , 1996 , 32, 2135-2145	5.4	220
279	A sensitivity analysis of the Penman-Monteith actual evapotranspiration estimates. <i>Journal of Hydrology</i> , 1979 , 44, 169-190	6	217
278	Similarity and scale in catchment storm response. <i>Reviews of Geophysics</i> , 1990 , 28, 1	23.1	213
277	So just why would a modeller choose to be incoherent?. <i>Journal of Hydrology</i> , 2008 , 354, 15-32	6	206
276	Uncertainty and equifinality in calibrating distributed roughness coefficients in a flood propagation model with limited data. <i>Advances in Water Resources</i> , 1998 , 22, 349-365	4.7	197
275	Kinematic subsurface stormflow. <i>Water Resources Research</i> , 1981 , 17, 1419-1424	5.4	197
274	The sensitivity of hydrological models to spatial rainfall patterns: an evaluation using observed data. <i>Journal of Hydrology</i> , 1994 , 159, 305-333	6	194
273	Data-based mechanistic modelling and the rainfall-flow non-linearity. <i>Environmetrics</i> , 1994 , 5, 335-363	1.3	190
272	GLUE: 20 years on. <i>Hydrological Processes</i> , 2014 , 28, 5897-5918	3.3	183
271	Towards integrated environmental models of everywhere: uncertainty, data and modelling as a learning process. <i>Hydrology and Earth System Sciences</i> , 2007 , 11, 460-467	5.5	178

270	WATER FLOW IN SOIL MACROPORES I. AN EXPERIMENTAL APPROACH. <i>Journal of Soil Science</i> , 1981 , 32, 1-13		178
269	Searching for the Holy Grail of scientific hydrology: $Q = S, R, A$ as closure. <i>Hydrology and Earth System Sciences</i> , 2006 , 10, 609-618	5.5	176
268	Multi-method global sensitivity analysis of flood inundation models. <i>Advances in Water Resources</i> , 2008 , 31, 1-14	4.7	174
267	On constraining the predictions of a distributed model: The incorporation of fuzzy estimates of saturated areas into the calibration process. <i>Water Resources Research</i> , 1998 , 34, 787-797	5.4	168
266	Flood-plain mapping: a critical discussion of deterministic and probabilistic approaches. <i>Hydrological Sciences Journal</i> , 2010 , 55, 364-376	3.5	167
265	Linking parameters across scales: Subgrid parameterizations and scale dependent hydrological models. <i>Hydrological Processes</i> , 1995 , 9, 507-525	3.3	161
264	Kinematic Wave Approximation to Infiltration Into Soils With Sorbing Macropores. <i>Water Resources Research</i> , 1985 , 21, 990-996	5.4	161
263	An Agenda for Land Surface Hydrology Research and a Call for the Second International Hydrological Decade. <i>Bulletin of the American Meteorological Society</i> , 1999 , 80, 2043-2058	6.1	160
262	Development of a European flood forecasting system. <i>International Journal of River Basin Management</i> , 2003 , 1, 49-59	1.7	155
261	On red herrings and real herrings: disinformation and information in hydrological inference. <i>Hydrological Processes</i> , 2011 , 25, 1676-1680	3.3	148
260	A limits of acceptability approach to model evaluation and uncertainty estimation in flood frequency estimation by continuous simulation: Skalka catchment, Czech Republic. <i>Water Resources Research</i> , 2009 , 45,	5.4	141
259	Use of spatially distributed water table observations to constrain uncertainty in a rainfall-runoff model. <i>Advances in Water Resources</i> , 1998 , 22, 305-317	4.7	141
258	Equifinality and uncertainty in physically based soil erosion models: application of the GLUE methodology to WEPP for sites in the UK and USA. <i>Earth Surface Processes and Landforms</i> , 2000 , 25, 825-845	3.7	141
257	Facets of uncertainty: epistemic uncertainty, non-stationarity, likelihood, hypothesis testing, and communication. <i>Hydrological Sciences Journal</i> , 2016 , 61, 1652-1665	3.5	137
256	On undermining the science?. <i>Hydrological Processes</i> , 2006 , 20, 3141-3146	3.3	134
255	A restatement of the natural science evidence concerning catchment-based 'natural' flood management in the UK. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017 , 473, 20160706	2.4	129
254	Multi-period and multi-criteria model conditioning to reduce prediction uncertainty in an application of TOPMODEL within the GLUE framework. <i>Journal of Hydrology</i> , 2007 , 332, 316-336	6	127
253	Towards a limits of acceptability approach to the calibration of hydrological models: Extending observation error. <i>Journal of Hydrology</i> , 2009 , 367, 93-103	6	126

252	On subsurface stormflow: Predictions with simple kinematic theory for saturated and unsaturated flows. <i>Water Resources Research</i> , 1982 , 18, 1627-1633	5.4	126
251	Bayesian updating of flood inundation likelihoods conditioned on flood extent data. <i>Hydrological Processes</i> , 2004 , 18, 3347-3370	3.3	123
250	On hydrological heterogeneity [Catchment morphology and catchment response. <i>Journal of Hydrology</i> , 1988 , 100, 353-375	6	119
249	On subsurface stormflow: an analysis of response times. <i>Hydrological Sciences Journal</i> , 1982 , 27, 505-523	3.5	119
248	Infiltration into a class of vertically non-uniform soils. <i>Hydrological Sciences Journal</i> , 1984 , 29, 425-434	3.5	118
247	Including spatially variable effective soil depths in TOPMODEL. <i>Journal of Hydrology</i> , 1997 , 202, 158-172	6	113
246	Towards identifying sources of subsurface flow: A comparison of components identified by a physically based runoff model and those determined by chemical mixing techniques. <i>Hydrological Processes</i> , 1992 , 6, 199-214	3.3	113
245	Fuzzy set approach to calibrating distributed flood inundation models using remote sensing observations. <i>Hydrology and Earth System Sciences</i> , 2007 , 11, 739-752	5.5	112
244	Estimation of flood inundation probabilities as conditioned on event inundation maps. <i>Water Resources Research</i> , 2003 , 39,	5.4	111
243	A hydraulic model to predict drought-induced mortality in woody plants: an application to climate change in the Mediterranean. <i>Ecological Modelling</i> , 2002 , 155, 127-147	3	108
242	A physically based model of heterogeneous hillslopes: 2. Effective hydraulic conductivities. <i>Water Resources Research</i> , 1989 , 25, 1227-1233	5.4	108
241	Dispersion parameters for undisturbed partially saturated soil. <i>Journal of Hydrology</i> , 1993 , 143, 19-43	6	106
240	Sensitivity to space and time resolution of a hydrological model using digital elevation data. <i>Hydrological Processes</i> , 1995 , 9, 69-81	3.3	106
239	Comment on Hyperresolution global land surface modeling: Meeting a grand challenge for monitoring Earth's terrestrial water [by Eric F. Wood et al.. <i>Water Resources Research</i> , 2012 , 48,	5.4	104
238	Flood frequency estimation by continuous simulation under climate change (with uncertainty). <i>Hydrology and Earth System Sciences</i> , 2000 , 4, 393-405	5.5	104
237	On the concept of model structural error. <i>Water Science and Technology</i> , 2005 , 52, 167-175	2.2	103
236	On the colour and spin of epistemic error (and what we might do about it). <i>Hydrology and Earth System Sciences</i> , 2011 , 15, 3123-3133	5.5	99
235	Flood frequency estimation by continuous simulation of subcatchment rainfalls and discharges with the aim of improving dam safety assessment in a large basin in the Czech Republic. <i>Journal of Hydrology</i> , 2004 , 292, 153-172	6	98

234	Flood frequency prediction for data limited catchments in the Czech Republic using a stochastic rainfall model and TOPMODEL. <i>Journal of Hydrology</i> , 1997 , 195, 256-278	6	95
233	Uncertainty in hydrograph separations based on geochemical mixing models. <i>Journal of Hydrology</i> , 2002 , 255, 90-106	6	95
232	A physically based model of heterogeneous hillslopes: 1. Runoff production. <i>Water Resources Research</i> , 1989 , 25, 1219-1226	5.4	94
231	Bayesian estimation of uncertainty in land surface-atmosphere flux predictions. <i>Journal of Geophysical Research</i> , 1997 , 102, 23991-23999		93
230	Probabilistic flood risk mapping including spatial dependence. <i>Hydrological Processes</i> , 2013 , 27, 1349-1363		92
229	Base cation concentrations in subsurface flow from a forested hillslope: The role of flushing frequency. <i>Water Resources Research</i> , 1998 , 34, 3535-3544	5.4	92
228	Runoff Production and Flood Frequency in Catchments of Order n: An Alternative Approach. <i>Water Science and Technology Library</i> , 1986 , 107-131	0.3	91
227	Modelling everything everywhere: a new approach to decision-making for water management under uncertainty. <i>Freshwater Biology</i> , 2012 , 57, 124-132	3.1	89
226	Developing a translational discourse to communicate uncertainty in flood risk between science and the practitioner. <i>Ambio</i> , 2007 , 36, 692-703	6.5	89
225	Spatial variability of soil phosphorus in relation to the topographic index and critical source areas: sampling for assessing risk to water quality. <i>Journal of Environmental Quality</i> , 2005 , 34, 2263-77	3.4	86
224	Causal models as multiple working hypotheses about environmental processes. <i>Comptes Rendus - Geoscience</i> , 2012 , 344, 77-88	1.4	84
223	Preferential flows and travel time distributions: defining adequate hypothesis tests for hydrological process models. <i>Hydrological Processes</i> , 2010 , 24, 1537-1547	3.3	83
222	Using interactive recession curve analysis to specify a general catchment storage model. <i>Hydrology and Earth System Sciences</i> , 1997 , 1, 101-113	5.5	83
221	On doing better hydrological science. <i>Hydrological Processes</i> , 2008 , 22, 3549-3553	3.3	83
220	Model Calibration and Uncertainty Estimation 2005 ,		82
219	On the generalized kinematic routing method. <i>Water Resources Research</i> , 1979 , 15, 1238-1242	5.4	82
218	The Geochemical Evolution of Riparian Ground Water in a Forested Piedmont Catchment. <i>Ground Water</i> , 2003 , 41, 913-925	2.4	81
217	New method developed for studying flow on hillslopes. <i>Eos</i> , 1996 , 77, 465-472	1.5	80

216	ASSESSING THE EFFECT OF SPATIAL PATTERN OF PRECIPITATION IN MODELING STREAM FLOW HYDROGRAPHS1. <i>Journal of the American Water Resources Association</i> , 1982 , 18, 823-829	2.1	80
215	Comment on Hydrological forecasting uncertainty assessment: Incoherence of the GLUE methodology by Pietro Mantovan and Ezio Todini. <i>Journal of Hydrology</i> , 2007 , 338, 315-318	6	79
214	Grasping the unavoidable subjectivity in calibration of flood inundation models: A vulnerability weighted approach. <i>Journal of Hydrology</i> , 2007 , 333, 275-287	6	79
213	Modelling the effect of fire-exclusion and prescribed fire on wildfire size in Mediterranean ecosystems. <i>Ecological Modelling</i> , 2005 , 183, 397-409	3	79
212	Uncertainty assessment of a process-based integrated catchment model of phosphorus. <i>Stochastic Environmental Research and Risk Assessment</i> , 2009 , 23, 991-1010	3.5	77
211	Data assimilation and adaptive forecasting of water levels in the river Severn catchment, United Kingdom. <i>Water Resources Research</i> , 2006 , 42,	5.4	77
210	I believe in climate change but how precautionary do we need to be in planning for the future?. <i>Hydrological Processes</i> , 2011 , 25, 1517-1520	3.3	74
209	Robert E. Horton's perceptual model of infiltration processes. <i>Hydrological Processes</i> , 2004 , 18, 3447-3460,	3	74
208	A guide to good practice in modeling semantics for authors and referees. <i>Water Resources Research</i> , 2013 , 49, 5092-5098	5.4	71
207	Flood frequency estimation by continuous simulation for a catchment treated as ungauged (with uncertainty). <i>Water Resources Research</i> , 2002 , 38, 14-1-14-14	5.4	71
206	Throughflow and solute transport in an isolated sloping soil block in a forested catchment. <i>Journal of Hydrology</i> , 1991 , 124, 81-99	6	70
205	The hydrological response of headwater and sideslope areas / La réponse hydrologique des zones de cours supérieurs et des zones de pente latérale. <i>Hydrological Sciences Bulletin Des Sciences Hydrologiques</i> , 1978 , 23, 419-437		70
204	Models as multiple working hypotheses: hydrological simulation of tropical alpine wetlands. <i>Hydrological Processes</i> , 2011 , 25, 1784-1799	3.3	69
203	Towards the use of catchment geomorphology in flood frequency predictions. <i>Earth Surface Processes and Landforms</i> , 1987 , 12, 69-82	3.7	69
202	Dynamic real-time prediction of flood inundation probabilities. <i>Hydrological Sciences Journal</i> , 1998 , 43, 181-196	3.5	68
201	On the Variation of Infiltration Into a Homogeneous Soil Matrix Containing a Population of Macropores. <i>Water Resources Research</i> , 1986 , 22, 383-388	5.4	68
200	On the concept of delivery of sediment and nutrients to stream channels. <i>Hydrological Processes</i> , 2005 , 19, 551-556	3.3	67
199	Modelling the hydrological response of mediterranean catchments, Prades, Catalonia. The use of distributed models as aids to hypothesis formulation. <i>Hydrological Processes</i> , 1997 , 11, 1287-1306	3.3	66

198	Application of a Generalized TOPMODEL to the Small Ringelbach Catchment, Vosges, France. <i>Water Resources Research</i> , 1996 , 32, 2147-2159	5.4	66
197	Informal likelihood measures in model assessment: Theoretic development and investigation. <i>Advances in Water Resources</i> , 2008 , 31, 1087-1100	4.7	65
196	Vadose zone flow model uncertainty as conditioned on geophysical data. <i>Ground Water</i> , 2003 , 41, 119-224	4.4	65
195	An evaluation of three stochastic rainfall models. <i>Journal of Hydrology</i> , 2000 , 228, 130-149	6	64
194	Analytical compensation between DTM grid resolution and effective values of saturated hydraulic conductivity within the TOPMODEL framework. <i>Hydrological Processes</i> , 1997 , 11, 1331-1346	3.3	63
193	Temporal variability in phosphorus transfers: classifying concentration-discharge event dynamics. <i>Hydrology and Earth System Sciences</i> , 2004 , 8, 88-97	5.5	62
192	Integrated modeling of flow and residence times at the catchment scale with multiple interacting pathways. <i>Water Resources Research</i> , 2013 , 49, 4738-4750	5.4	61
191	Hyperresolution information and hyperresolution ignorance in modelling the hydrology of the land surface. <i>Science China Earth Sciences</i> , 2015 , 58, 25-35	4.6	59
190	Rainfall-runoff modelling of a humid tropical catchment: the TOPMODEL approach. <i>Hydrological Processes</i> , 2002 , 16, 231-253	3.3	58
189	Visualization approaches for communicating real-time flood forecasting level and inundation information. <i>Journal of Flood Risk Management</i> , 2010 , 3, 140-150	3.1	55
188	A data based mechanistic approach to nonlinear flood routing and adaptive flood level forecasting. <i>Advances in Water Resources</i> , 2008 , 31, 1048-1056	4.7	55
187	Concepts of Information Content and Likelihood in Parameter Calibration for Hydrological Simulation Models. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015 , 20,	1.8	53
186	Sensitivity analysis based on regional splits and regression trees (SARS-RT). <i>Environmental Modelling and Software</i> , 2006 , 21, 976-990	5.2	53
185	Equifinality, sensitivity and predictive uncertainty in the estimation of critical loads. <i>Science of the Total Environment</i> , 1999 , 236, 191-214	10.2	53
184	Primary weathering rates, water transit times, and concentration-discharge relations: A theoretical analysis for the critical zone. <i>Water Resources Research</i> , 2017 , 53, 942-960	5.4	52
183	On hypothesis testing in hydrology. <i>Hydrological Processes</i> , 2001 , 15, 1655-1657	3.3	52
182	The seventh facet of uncertainty: wrong assumptions, unknowns and surprises in the dynamics of human-water systems. <i>Hydrological Sciences Journal</i> , 2016 , 61, 1748-1758	3.5	50
181	Discharge and water table predictions using a generalised TOPMODEL formulation. <i>Hydrological Processes</i> , 1997 , 11, 1145-1167	3.3	50

180	Flood frequency estimation by continuous simulation (with likelihood based uncertainty estimation). <i>Hydrology and Earth System Sciences</i> , 2000 , 4, 23-34	5.5	50
179	Equifinality and the Problem of Robust Calibration in Nitrogen Budget Simulations. <i>Soil Science Society of America Journal</i> , 1999 , 63, 1934-1941	2.5	50
178	Hillslope hydrographs by the finite element method. <i>Earth Surfaces Processes</i> , 1977 , 2, 13-28		50
177	Interflow 1989 , 191-219		50
176	A modelling framework for evaluation of the hydrological impacts of nature-based approaches to flood risk management, with application to in-channel interventions across a 29-km ² scale catchment in the United Kingdom. <i>Hydrological Processes</i> , 2017 , 31, 1734-1748	3.3	49
175	Climate Change: The Need to Consider Human Forcings Besides Greenhouse Gases. <i>Eos</i> , 2009 , 90, 413	1.5	48
174	Uncertainty estimation of end-member mixing using generalized likelihood uncertainty estimation (GLUE), applied in a lowland catchment. <i>Water Resources Research</i> , 2013 , 49, 4792-4806	5.4	47
173	Comment on Pursuing the method of multiple working hypotheses for hydrological modeling by P. Clark et al.. <i>Water Resources Research</i> , 2012 , 48,	5.4	47
172	Conditioning uncertainty in ecological models: Assessing the impact of fire management strategies. <i>Ecological Modelling</i> , 2007 , 207, 34-44	3	47
171	Flow and flow routing in upland channel networks / L'Écoulement et le calcul du cheminement de l'Écoulement dans les réseaux des canaux montagneux. <i>Hydrological Sciences Bulletin Des Sciences Hydrologiques</i> , 1979 , 24, 303-325		47
170	Do we need a Community Hydrological Model?. <i>Water Resources Research</i> , 2015 , 51, 7777-7784	5.4	46
169	Using internal catchment information to reduce the uncertainty of discharge and baseflow predictions. <i>Advances in Water Resources</i> , 2007 , 30, 808-823	4.7	46
168	Multivariate seasonal period model rejection within the generalised likelihood uncertainty estimation procedure. <i>Water Science and Application</i> , 2003 , 69-87		46
167	Regionalization as a learning process. <i>Water Resources Research</i> , 2009 , 45,	5.4	45
166	Uncertainty in the estimation of critical loads: A practical methodology. <i>Water, Air, and Soil Pollution</i> , 1997 , 98, 297-316	2.6	45
165	Multi-objective parameter conditioning of a three-source wheat canopy model. <i>Agricultural and Forest Meteorology</i> , 2004 , 122, 39-63	5.8	45
164	A discrete particle representation of hillslope hydrology: hypothesis testing in reproducing a tracer experiment at Gårdsjö, Sweden. <i>Hydrological Processes</i> , 2011 , 25, 3602-3612	3.3	44
163	Modelling hydrologic responses in a small forested catchment (Panola Mountain, Georgia, USA): a comparison of the original and a new dynamic TOPMODEL. <i>Hydrological Processes</i> , 2003 , 17, 345-362	3.3	44

162	The Predictive Uncertainty of Land Surface Fluxes in Response to Increasing Ambient Carbon Dioxide. <i>Journal of Climate</i> , 2001 , 14, 2551-2562	4.4	44
161	Modelling extreme rainfalls using a modified random pulse Bartlett-Lewis stochastic rainfall model (with uncertainty). <i>Advances in Water Resources</i> , 2000 , 24, 203-211	4.7	44
160	GLUE Based Assessment on the Overall Predictions of a MIKE SHE Application. <i>Water Resources Management</i> , 2009 , 23, 1325-1349	3.7	43
159	The introduction of macroscale hydrological complexity into land surface-atmosphere transfer models and the effect on planetary boundary layer development. <i>Journal of Hydrology</i> , 1995 , 166, 421-444	6.4	43
158	Dynamic TOPMODEL: A new implementation in R and its sensitivity to time and space steps. <i>Environmental Modelling and Software</i> , 2015 , 72, 155-172	5.2	41
157	Multiple sources of predictive uncertainty in modeled estimates of net ecosystem CO2 exchange. <i>Ecological Modelling</i> , 2009 , 220, 3259-3270	3	41
156	Estimation of evapotranspiration at the landscape scale: A fuzzy disaggregation approach. <i>Water Resources Research</i> , 1997 , 33, 2929-2938	5.4	41
155	On model uncertainty, risk and decision making. <i>Hydrological Processes</i> , 2000 , 14, 2605-2606	3.3	41
154	Downstream changes in DOC: Inferring contributions in the face of model uncertainties. <i>Water Resources Research</i> , 2014 , 50, 514-525	5.4	40
153	The limits of splitting: Hydrology. <i>Science of the Total Environment</i> , 1996 , 183, 89-97	10.2	40
152	Inferences about solute transport in macroporous forest soils from time series models. <i>Geoderma</i> , 1990 , 46, 249-262	6.7	40
151	Testing the distributed water table predictions of TOPMODEL (allowing for uncertainty in model calibration): The death of TOPMODEL?. <i>Water Resources Research</i> , 2002 , 38, 39-1-39-11	5.4	39
150	WATER FLOW IN SOIL MACROPORES III. A STATISTICAL APPROACH. <i>Journal of Soil Science</i> , 1981 , 32, 31-39		39
149	Smiling in the rain: Seven reasons to be positive about uncertainty in hydrological modelling. <i>Hydrological Processes</i> , 2013 , 27, 1117-1122	3.3	38
148	Surface water hydrology runoff generation and basin structure. <i>Reviews of Geophysics</i> , 1983 , 21, 721	23.1	38
147	Comments on generalised likelihood uncertainty estimation. <i>Reliability Engineering and System Safety</i> , 2006 , 91, 1315-1321	6.3	37
146	Implications of model uncertainty for the mapping of hillslope-scale soil erosion predictions. <i>Earth Surface Processes and Landforms</i> , 2001 , 26, 1333-1352	3.7	37
145	Input of fecal coliform bacteria to an upland stream channel in the Yorkshire Dales. <i>Water Resources Research</i> , 1992 , 28, 1869-1876	5.4	36

144	Embracing equifinality with efficiency: Limits of Acceptability sampling using the DREAM(LOA) algorithm. <i>Journal of Hydrology</i> , 2018 , 559, 954-971	6	34
143	On hypothesis testing in hydrology: Why falsification of models is still a really good idea. <i>Wiley Interdisciplinary Reviews: Water</i> , 2018 , 5, e1278	5.7	34
142	Functional classification and evaluation of hydrographs based on Multicomponent Mapping (Mx). <i>International Journal of River Basin Management</i> , 2004 , 2, 89-100	1.7	34
141	Regional water balance modelling using flow-duration curves with observational uncertainties. <i>Hydrology and Earth System Sciences</i> , 2014 , 18, 2993-3013	5.5	33
140	So how much of your error is epistemic? Lessons from Japan and Italy. <i>Hydrological Processes</i> , 2013 , 27, 1677-1680	3.3	33
139	Observational data and scale-dependent parameterizations: explorations using a virtual hydrological reality. <i>Hydrological Processes</i> , 2002 , 16, 293-312	3.3	33
138	Conditioning a multiple-patch SVAT Model using uncertain time-space estimates of latent heat fluxes as inferred from remotely sensed data. <i>Water Resources Research</i> , 1999 , 35, 2751-2761	5.4	33
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