

Barry Croke

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

6,064
citations

109137

35
h-index

74018

75
g-index

108
all docs

108
docs citations

108
times ranked

7675
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterising performance of environmental models. <i>Environmental Modelling and Software</i> , 2013, 40, 1-20.	1.9	1,141
2	Flood inundation modelling: A review of methods, recent advances and uncertainty analysis. <i>Environmental Modelling and Software</i> , 2017, 90, 201-216.	1.9	736
3	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019, 64, 1141-1158.	1.2	474
4	A review of surrogate models and their application to groundwater modeling. <i>Water Resources Research</i> , 2015, 51, 5957-5973.	1.7	366
5	Assessing the impact of land use change on hydrology by ensemble modeling (LUCHEM). I: Model intercomparison with current land use. <i>Advances in Water Resources</i> , 2009, 32, 129-146.	1.7	177
6	Carbon and nitrogen abundance variations on the main sequence of 47 Tucanae. <i>Monthly Notices of the Royal Astronomical Society</i> , 1998, 298, 601-624.	1.6	163
7	A review of catchment-scale water quality and erosion models and a synthesis of future prospects. <i>Environmental Modelling and Software</i> , 2019, 114, 75-97.	1.9	142
8	Addressing ten questions about conceptual rainfall-runoff models with global sensitivity analyses in R. <i>Journal of Hydrology</i> , 2013, 503, 135-152.	2.3	133
9	Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) II: Ensemble combinations and predictions. <i>Advances in Water Resources</i> , 2009, 32, 147-158.	1.7	128
10	An open software environment for hydrological model assessment and development. <i>Environmental Modelling and Software</i> , 2011, 26, 1171-1185.	1.9	122
11	A catchment moisture deficit module for the IHACRES rainfall-runoff model. <i>Environmental Modelling and Software</i> , 2004, 19, 1-5.	1.9	107
12	Integrated assessment modelling for water resource allocation and management: A generalised conceptual framework. <i>Environmental Modelling and Software</i> , 2007, 22, 733-742.	1.9	98
13	A dynamic model for predicting hydrologic response to land cover changes in gauged and ungauged catchments. <i>Journal of Hydrology</i> , 2004, 291, 115-131.	2.3	96
14	A review of nitrogen and phosphorus export to waterways: context for catchment modelling. <i>Marine and Freshwater Research</i> , 2006, 57, 757.	0.7	94
15	Introductory overview of identifiability analysis: A guide to evaluating whether you have the right type of data for your modeling purpose. <i>Environmental Modelling and Software</i> , 2019, 119, 418-432.	1.9	93
16	Assessing the impact of land use change on hydrology by ensemble modeling (LUCHEM) III: Scenario analysis. <i>Advances in Water Resources</i> , 2009, 32, 159-170.	1.7	87
17	Three complementary methods for sensitivity analysis of a water quality model. <i>Environmental Modelling and Software</i> , 2012, 37, 19-29.	1.9	74
18	Disinfection by-product formation and mitigation strategies in point-of-use chlorination of turbid and non-turbid waters in western Kenya. <i>Journal of Water and Health</i> , 2008, 6, 67-82.	1.1	69

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19	Suspended sediment, nitrogen and phosphorus concentrations and exports during storm-events to the Tuross estuary, Australia. <i>Journal of Environmental Management</i> , 2009, 90, 879-887.	3.8	62
20	Integrated assessment of water resources: Australian experiences. <i>Water Resources Management</i> , 2006, 21, 351-373.	1.9	60
21	Evaluation of streamflow predictions by the IHACRES rainfall-runoff model in two South African catchments. <i>Environmental Modelling and Software</i> , 2003, 18, 705-712.	1.9	59
22	The effects of climate change on ecologically-relevant flow regime and water quality attributes. <i>Stochastic Environmental Research and Risk Assessment</i> , 2014, 28, 67-82.	1.9	59
23	Adaptation of water resources systems to changing society and environment: a statement by the International Association of Hydrological Sciences. <i>Hydrological Sciences Journal</i> , 2016, 61, 2803-2817.	1.2	57
24	Model development for integrated assessment of water allocation options. <i>Water Resources Research</i> , 2004, 40, .	1.7	54
25	Data time-step dependency of conceptual rainfall-runoff streamflow model parameters: an empirical study with implications for regionalisation. <i>Hydrological Sciences Journal</i> , 2008, 53, 685-695.	1.2	54
26	A review of foundational methods for checking the structural identifiability of models: Results for rainfall-runoff. <i>Journal of Hydrology</i> , 2015, 520, 1-16.	2.3	54
27	Modeling Water Quality in Watersheds: From Here to the Next Generation. <i>Water Resources Research</i> , 2020, 56, e2020WR027721.	1.7	54
28	IHACRES Classic Plus: A redesign of the IHACRES rainfall-runoff model. <i>Environmental Modelling and Software</i> , 2006, 21, 426-427.	1.9	51
29	Modelling floodplain inundation for environmental flows: Gwydir wetlands, Australia. <i>Ecological Modelling</i> , 2008, 211, 350-362.	1.2	49
30	Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) IV: Model sensitivity to data aggregation and spatial (re-)distribution. <i>Advances in Water Resources</i> , 2009, 32, 171-192.	1.7	49
31	Certain trends in uncertainty and sensitivity analysis: An overview of software tools and techniques. <i>Environmental Modelling and Software</i> , 2020, 124, 104588.	1.9	49
32	Evidence from stellar abundances for a large age difference between two globular clusters. <i>Nature</i> , 1991, 351, 212-214.	13.7	48
33	Can NDVI response indicate the effective flood extent in macrophyte dominated floodplain wetlands?. <i>Ecological Indicators</i> , 2014, 45, 486-493.	2.6	45
34	Water resources in the desertification-threatened Messara Valley of Crete: estimation of the annual water budget using a rainfall-runoff model. <i>Environmental Modelling and Software</i> , 2000, 15, 387-402.	1.9	39
35	Predictions in catchment hydrology: an Australian perspective. <i>Marine and Freshwater Research</i> , 2001, 52, 65.	0.7	38
36	Sensitivity analysis for assessing the behaviour of a landscape-based sediment source and transport model. <i>Environmental Modelling and Software</i> , 2003, 18, 741-751.	1.9	37

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37	A Biophysical Toolbox for assessment and management of land and water resources in rural catchments in Northern Thailand. <i>Ecological Modelling</i> , 2004, 171, 279-300.	1.2	36
38	An integrated modelling toolbox for water resources assessment and management in highland catchments: Model description. <i>Agricultural Systems</i> , 2006, 89, 106-131.	3.2	36
39	Position paper: Sensitivity analysis of spatially distributed environmental models- a pragmatic framework for the exploration of uncertainty sources. <i>Environmental Modelling and Software</i> , 2020, 134, 104857.	1.9	35
40	Use of a simple surface-groundwater interaction model to inform water management. <i>Australian Journal of Earth Sciences</i> , 2009, 56, 71-80.	0.4	33
41	The role of 'top-down' modelling for Prediction in Ungauged Basins (PUB). <i>Hydrological Processes</i> , 2003, 17, 1673-1679.	1.1	31
42	Exploring streamflow response to effective rainfall across event magnitude scale. <i>Hydrological Processes</i> , 2004, 18, 1467-1486.	1.1	31
43	Hydrogeology Journal, 2012, 20, 985-993.	0.9	26
44	A technique for deriving an average event unit hydrograph from streamflow-only data for ephemeral quick-flow-dominant catchments. <i>Advances in Water Resources</i> , 2006, 29, 493-502.	1.7	25
45	An assessment of modelling capacity to identify the impacts of climate variability on catchment hydrology. <i>Mathematics and Computers in Simulation</i> , 2011, 81, 1419-1429.	2.4	23
46	Coral Skeletons Provide Historical Evidence of Phosphorus Runoff on the Great Barrier Reef. <i>PLoS ONE</i> , 2013, 8, e75663.	1.1	23
47	Effects of data time-step on the accuracy of calibrated rainfall-streamflow model parameters: practical aspects of uncertainty reduction. <i>Hydrology Research</i> , 2013, 44, 430-440.	1.1	22
48	Applicability Assessment and Uncertainty Analysis of Multi-Precipitation Datasets for the Simulation of Hydrologic Models. <i>Water (Switzerland)</i> , 2018, 10, 1611.	1.2	22
49	Sensitivity testing of a model for exploring water resources utilisation and management options. <i>Environmental Modelling and Software</i> , 2005, 20, 1013-1030.	1.9	21
50	Including the influence of groundwater exchanges in a lumped rainfall-runoff model. <i>Mathematics and Computers in Simulation</i> , 2009, 79, 2689-2700.	2.4	21
51	Managed aquifer recharge in farming landscapes using large floods: an opportunity to improve outcomes for the Murray-Darling Basin?. <i>Australasian Journal of Environmental Management</i> , 2013, 20, 34-48.	0.6	20
52	Realizing modelling outcomes: A synthesis of success factors and their use in a retrospective analysis of 15 Australian water resource projects. <i>Environmental Modelling and Software</i> , 2017, 94, 63-72.	1.9	20
53	Overcoming the challenges of using a rainfall-runoff model to estimate the impacts of groundwater extraction on low flows in an ephemeral stream. <i>Hydrology Research</i> , 2014, 45, 58-72.	1.1	18
54	Diffuse groundwater recharge estimation confronting hydrological modelling uncertainty. <i>Journal of Hydrology</i> , 2020, 584, 124642.	2.3	18

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55	Evaluation of approaches for estimation of rainfall and the unit hydrograph. <i>Hydrology Research</i> , 2011, 42, 372-385.	1.1	17
56	Bayesian inference of uncertainties in precipitation–streamflow modeling in a snow affected catchment. <i>Water Resources Research</i> , 2012, 48, .	1.7	17
57	Improving crop production for food security and improved livelihoods on the East India Plateau. I. Rainfall-related risks with rice and opportunities for improved cropping systems. <i>Agricultural Systems</i> , 2015, 137, 166-179.	3.2	17
58	The NGC 6426 RR Lyrae Variables and Horizontal-Branch Morphology. <i>Astronomical Journal</i> , 2000, 119, 851-858.	1.9	16
59	A deterministic model to quantify pathogen loads in drinking water catchments: pathogen budget for the Wingecarribee. <i>Water Science and Technology</i> , 2005, 52, 191-197.	1.2	16
60	Predicting daily streamflow using rainfall forecasts, a simple loss module and unit hydrographs: Two Brazilian catchments. <i>Environmental Modelling and Software</i> , 2007, 22, 1229-1239.	1.9	16
61	Chapter Two Good Modelling Practice. <i>Developments in Integrated Environmental Assessment</i> , 2008, 3, 15-31.	0.0	16
62	Enhancing the Capability of a Simple, Computationally Efficient, Conceptual Flood Inundation Model in Hydrologically Complex Terrain. <i>Water Resources Management</i> , 2019, 33, 831-845.	1.9	16
63	An integrated modelling toolbox for water resources assessment and management in highland catchments: Sensitivity analysis and testing. <i>Agricultural Systems</i> , 2006, 89, 132-164.	3.2	15
64	Use of the IHACRES rainfall-runoff model in arid and semi-arid regions. , 2007, , 41-48.		15
65	Lithium in Large Magellanic Cloud carbon stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 341, 1290-1298.	1.6	13
66	Suspected cool R Coronae Borealis stars in the Magellanic Clouds. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 344, 325-335.	1.6	13
67	Development of a distributed flow model for underpinning assessment of water allocation options in the Namoi River Basin, Australia. <i>Journal of Hydrology</i> , 2006, 319, 51-71.	2.3	13
68	The Age of NGC 6426, a Metal-poor Globular Cluster in the Galactic Halo. <i>Astronomical Journal</i> , 1999, 117, 3059-3065.	1.9	12
69	J-type carbon stars in the Large Magellanic Cloud. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 341, 534-550.	1.6	12
70	Sensitivity of modelled gross primary productivity to topographic effects on surface radiation: A case study in the Cotter River Catchment, Australia. <i>Ecological Modelling</i> , 2011, 222, 795-803.	1.2	12
71	Groundwater salinization intensifies drought impacts in forests and reduces refuge capacity. <i>Journal of Applied Ecology</i> , 2015, 52, 1116-1125.	1.9	12
72	Comparing methods of randomizing Sobolâ€™ sequences for improving uncertainty of metrics in variance-based global sensitivity estimation. <i>Reliability Engineering and System Safety</i> , 2021, 210, 107499.	5.1	11

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73	Removal of Cosmic-Ray Events in Spectroscopic CCD Data. Publications of the Astronomical Society of the Pacific, 1995, 107, 1255.	1.0	9
74	Water resources of Cyprus under changing climatic conditions: Modelling approach, validation and limitations. Environmental Modelling and Software, 2014, 60, 202-218.	1.9	9
75	Mapping the Distribution of Water Resource Security in the Beijing-Tianjin-Hebei Region at the County Level under a Changing Context. Sustainability, 2019, 11, 6463.	1.6	9
76	A socio-environmental model for exploring sustainable water management futures: Participatory and collaborative modelling in the Lower Campaspe catchment. Journal of Hydrology: Regional Studies, 2020, 28, 100669.	1.0	9
77	Quantifying climate contributions to changes in groundwater discharge for headwater catchments in a major Australian basin. Science of the Total Environment, 2020, 729, 138910.	3.9	7
78	A methodological framework for the hydrological model selection process in water resource management projects. Natural Resource Modelling, 2021, 34, e12326.	0.8	7
79	BVRlphotometry of the galactic globular cluster NGC 6779. Monthly Notices of the Royal Astronomical Society, 2004, 348, 1157-1163.	1.6	6
80	A formative and self-reflective approach to monitoring and evaluation of interdisciplinary team research: An integrated water resource modelling application in Australia. Journal of Hydrology, 2021, 596, 126070.	2.3	6
81	Discussion of "Effects of temporal resolution on hydrological model parameters and its impact on prediction of river discharge". Hydrological Sciences Journal, 2011, 56, 521-524.	1.2	5
82	Using Mixed Probability Distribution Functions for Modelling Non-Zero Sub-Daily Rainfall in Australia. Geosciences (Switzerland), 2020, 10, 43.	1.0	5
83	Development of an integrated model for the Campaspe catchment: a tool to help improve understanding of the interaction between society, policy, farming decision, ecology, hydrology and climate. Proceedings of the International Association of Hydrological Sciences, 0, 379, 1-12.	1.0	5
84	Predicting wildfire induced changes to runoff: A review and synthesis of modeling approaches. Wiley Interdisciplinary Reviews: Water, 2022, 9, .	2.8	5
85	Set-membership approach for identification of parameter and prediction uncertainty in power-law relationships: The case of sediment yield. Environmental Modelling and Software, 2013, 40, 171-180.	1.9	4
86	A hybrid vector-raster approach to drainage network construction in agricultural watersheds with rice terraces and ponds. Journal of Hydrology, 2021, 601, 126585.	2.3	4
87	Model design for the hydrology of tree belt plantations on hillslopes. Mathematics and Computers in Simulation, 2005, 69, 188-212.	2.4	3
88	Modeling the Impact of Watershed Development on Water Resources in India. , 2015, , 99-148.		3
89	Marrying Hydrological Modelling and Integrated Assessment for the needs of Water Resource Management. Proceedings of the International Association of Hydrological Sciences, 0, 364, 351-356.	1.0	3
90	Risk of Human Illness from Recreational Exposure to Microbial Pathogens in Freshwater Bodies: A Systematic Review. Exposure and Health, 2022, 14, 325-343.	2.8	3

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91	Assessing the predictive impact of factor fixing with an adaptive uncertainty-based approach. Environmental Modelling and Software, 2022, 148, 105290.	1.9	3
92	Water harvesting and better cropping systems for the benefit of small farmers in watersheds of the East India Plateau. Water Practice and Technology, 2012, 7, .	1.0	2
93	Property-based Sensitivity Analysis: An approach to identify model implementation and integration errors. Environmental Modelling and Software, 2021, 139, 105013.	1.9	2
94	Integrated assessment of water resources: Australian experiences. , 2006, , 351-373.		2
95	Impacts of meso-scale Watershed Development in Andhra Pradesh (India) and their implications for designing and implementing improved WSD policies and programs. Water Practice and Technology, 2012, 7, .	1.0	2
96	Benchmarking Active Subspace methods of global sensitivity analysis against variance-based Sobol' and Morris methods with established test functions. Environmental Modelling and Software, 2022, 149, 105310.	1.9	2
97	Applications of Multi-object Spectroscopy â€“ A large Sample of Carbon Stars in the LMC. Symposium - International Astronomical Union, 1999, 192, 480-488.	0.1	1
98	Editorial: Data-based perceptions on Predictions in Ungauged Basins. Hydrology Research, 2013, 44, 399-400.	1.1	1
99	Modelling for Managing the Complex Issue of Catchment-Scale Surface and Groundwater Allocation. Advances in Intelligent Systems and Computing, 2014, , 25-41.	0.5	1
100	Editorial: Special Issue on Water security and the food-water-energy nexus: drivers, responses and feedbacks at local to global scales. Proceedings of the International Association of Hydrological Sciences, 0, 376, 1-1.	1.0	1
101	An integrated approach to improving rural livelihoods: examples from India and Bangladesh. Proceedings of the International Association of Hydrological Sciences, 0, 376, 45-50.	1.0	1
102	Modifications to a rainfall-streamflow model to handle "non-stationarity". Proceedings of the International Association of Hydrological Sciences, 0, 371, 29-33.	1.0	0
103	Investigation of determinism-related issues in the Sobolâ€™2 low-discrepancy sequence for producing sound global sensitivity analysis indices. ANZIAM Journal, 0, 62, C84-C97.	0.0	0