

# Michael Bruen

## List of Publications by Year in descending order

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Version: 2024-02-01

91  
papers

3,256  
citations

185998

28  
h-index

174990

52  
g-index

102  
all docs

102  
docs citations

102  
times ranked

3993  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling Root Water Uptake in Hydrological and Climate Models. Bulletin of the American Meteorological Society, 2001, 82, 2797-2809.	1.7	330
2	Homogenization of the terrestrial water cycle. Nature Geoscience, 2020, 13, 656-658.	5.4	242
3	A simple model for estimating the sensitivity of runoff to long-term changes in precipitation without a change in vegetation. Advances in Water Resources, 1999, 23, 153-163.	1.7	211
4	Effectiveness of a drinking-water treatment sludge in removing different phosphorus species from aqueous solution. Separation and Purification Technology, 2007, 55, 300-306.	3.9	162
5	Choosing realistic values of indifference, preference and veto thresholds for use with environmental criteria within ELECTRE. European Journal of Operational Research, 1998, 107, 542-551.	3.5	152
6	A new system for weighting environmental criteria for use within ELECTRE III. European Journal of Operational Research, 1998, 107, 552-563.	3.5	145
7	Impact of a physically based soil water flow and soil-plant interaction representation for modeling large-scale land surface processes. Journal of Geophysical Research, 2002, 107, ACL 3-1-ACL 3-19.	3.3	100
8	A comparison of SWAT, HSPF and SHETRAN/GOPC for modelling phosphorus export from three catchments in Ireland. Water Research, 2007, 41, 1065-1073.	5.3	89
9	Sources of nitrogen and phosphorus emissions to Irish rivers and coastal waters: Estimates from a nutrient load apportionment framework. Science of the Total Environment, 2017, 601-602, 326-339.	3.9	83
10	Modelling stream-aquifer seepage in an alluvial aquifer: an improved losing-stream package for MODFLOW. Journal of Hydrology, 2002, 264, 69-86.	2.3	82
11	The COST 731 Action: A review on uncertainty propagation in advanced hydro-meteorological forecast systems. Atmospheric Research, 2011, 100, 150-167.	1.8	76
12	ELECTRE and Decision Support. , 2000, , .		71
13	Technical assessment and evaluation of environmental models and software: Letter to the Editor. Environmental Modelling and Software, 2011, 26, 328-336.	1.9	64
14	Validation of remotely sensed rainfall over major climatic regions in Northeast Tanzania. Physics and Chemistry of the Earth, 2014, 67-69, 55-63.	1.2	56
15	Functional networks in real-time flood forecasting—a novel application. Advances in Water Resources, 2005, 28, 899-909.	1.7	55
16	An efficient and robust method for estimating unit hydrograph ordinates. Journal of Hydrology, 1984, 70, 1-24.	2.3	54
17	Sensitivity of surface fluxes to the number of layers in the soil model used in GCMs. Geophysical Research Letters, 2000, 27, 3329-3332.	1.5	47
18	Modelling the hydrological impacts of rural land use change. Hydrology Research, 2014, 45, 737-754.	1.1	44

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19	Assessing the relative importance of parameter and forcing uncertainty and their interactions in conceptual hydrological model simulations. <i>Advances in Water Resources</i> , 2016, 97, 299-313.	1.7	41
20	The impact of cattle access on ecological water quality in streams: Examples from agricultural catchments within Ireland. <i>Science of the Total Environment</i> , 2016, 547, 17-29.	3.9	38
21	Measurement differences between turbidity instruments, and their implications for suspended sediment concentration and load calculations: A sensor inter-comparison study. <i>Journal of Environmental Management</i> , 2017, 199, 99-108.	3.8	38
22	Reuse of Aluminum-based Water Treatment Sludge to Immobilize a Wide Range of Phosphorus Contamination: Equilibrium Study with Different Isotherm Models. <i>Separation Science and Technology</i> , 2007, 42, 2705-2721.	1.3	36
23	Understanding hydrological flow paths in conceptual catchment models using uncertainty and sensitivity analysis. <i>Computers and Geosciences</i> , 2016, 90, 66-77.	2.0	36
24	Combined Hydraulic and Black-Box Models for Flood Forecasting in Urban Drainage Systems. <i>Journal of Hydrologic Engineering - ASCE</i> , 2006, 11, 589-596.	0.8	35
25	Using ELECTRE III to Choose Route for Dublin Port Motorway. <i>Journal of Transportation Engineering</i> , 2000, 126, 313-323.	0.9	34
26	Advancing ecohydrology in the 21st century: A convergence of opportunities. <i>Ecohydrology</i> , 2020, 13, e2208.	1.1	34
27	Bankfull discharge and recurrence intervals in Irish rivers. <i>Water Management</i> , 2013, 166, 381-393.	0.4	31
28	Sensitivity of stream-aquifer seepage to spatial variability of the saturated hydraulic conductivity of the aquifer. <i>Journal of Hydrology</i> , 2004, 293, 289-302.	2.3	29
29	The impact of a catastrophic storm event on benthic macroinvertebrate communities in upland headwater streams and potential implications for ecological diversity and assessment of ecological status. <i>Journal of Limnology</i> , 2012, 71, 32.	0.3	29
30	A modified Muskingum routing approach for floodplain flows: Theory and practice. <i>Journal of Hydrology</i> , 2012, 470-471, 239-254.	2.3	28
31	Highway runoff quality in Ireland. <i>Journal of Environmental Monitoring</i> , 2007, 9, 366.	2.1	27
32	Vibrational Spectroscopy for Analysis of Water for Human Use and in Aquatic Ecosystems. <i>Critical Reviews in Environmental Science and Technology</i> , 2012, 42, 2546-2573.	6.6	26
33	A Three-Dimensional Hydro-Environmental Model of Dublin Bay. <i>Environmental Modeling and Assessment</i> , 2011, 16, 369-384.	1.2	25
34	Impact of low-head dams on bedload transport rates in coarse-bedded streams. <i>Science of the Total Environment</i> , 2020, 716, 136908.	3.9	25
35	Environmental consequences of a power plant shut-down: A three-dimensional water quality model of Dublin Bay. <i>Marine Pollution Bulletin</i> , 2013, 71, 117-128.	2.3	24
36	Challenges in Using Hydrology and Water Quality Models for Assessing Freshwater Ecosystem Services: A Review. <i>Geosciences (Switzerland)</i> , 2018, 8, 45.	1.0	23

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37	Influences on flood frequency distributions in Irish river catchments. <i>Hydrology and Earth System Sciences</i> , 2012, 16, 1137-1150.	1.9	21
38	Further insights into the responses of macroinvertebrate species to burial by sediment. <i>Hydrobiologia</i> , 2018, 805, 399-411.	1.0	21
39	A regional examination of episodic acidification response to reduced acidic deposition and the influence of plantation forests in Irish headwater streams. <i>Science of the Total Environment</i> , 2013, 443, 173-183.	3.9	20
40	Evaluating the relationship between biotic and sediment metrics using mesocosms and field studies. <i>Science of the Total Environment</i> , 2016, 568, 1092-1101.	3.9	19
41	Urban drainage in Ireland embracing sustainable systems. <i>Water and Environment Journal</i> , 2012, 26, 241-251.	1.0	18
42	An inspection-based assessment of obstacles to salmon, trout, eel and lamprey migration and river channel connectivity in Ireland. <i>Science of the Total Environment</i> , 2020, 719, 137215.	3.9	18
43	Calibration of hydrological models for ecologically relevant streamflow predictions: a trade-off between fitting well to data and estimating consistent parameter sets?. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 1031-1054.	1.9	16
44	Unit hydrograph stability and linear algebra. <i>Journal of Hydrology</i> , 1989, 111, 377-390.	2.3	15
45	Generation of two-dimensionally variable saturated hydraulic conductivity fields: Model theory, verification and computer program. <i>Computers and Geosciences</i> , 2008, 34, 876-890.	2.0	15
46	Development of neuro-fuzzy models to account for temporal and spatial variations in a lumped rainfall-runoff model. <i>Journal of Hydrology</i> , 2008, 349, 277-290.	2.3	15
47	Parameter sensitivity of a watershed-scale flood forecasting model as a function of modelling time-step. <i>Hydrology Research</i> , 2013, 44, 334-350.	1.1	15
48	Dublin Ireland: a city addressing challenging water supply, management, and governance issues. <i>Ecology and Society</i> , 2014, 19, .	1.0	15
49	Harmonic analysis of the stability of reverse routing in channels. <i>Hydrology and Earth System Sciences</i> , 2007, 11, 559-568.	1.9	14
50	Incremental distributed modelling investigation in a small agricultural catchment: 1. Overland flow with comparison with the unit hydrograph model. <i>Hydrological Processes</i> , 2007, 21, 80-91.	1.1	14
51	Systems Analysis – a new paradigm and decision support tools for the water framework directive. <i>Hydrology and Earth System Sciences</i> , 2008, 12, 739-749.	1.9	14
52	The effect of forest windrowing on physico-chemical water quality in Ireland. <i>Science of the Total Environment</i> , 2015, 514, 155-169.	3.9	12
53	An evaluation of visual and measurement-based methods for estimating deposited fine sediment. <i>International Journal of Sediment Research</i> , 2016, 31, 368-375.	1.8	12
54	Peak grain forecasts for the US High Plains amid withering waters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 26145-26150.	3.3	12

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55	Scaling effects on moisture fluxes at unvegetated land surfaces. <i>Water Resources Research</i> , 1997, 33, 2923-2927.	1.7	11
56	Diagnostic Analysis of Farmers' Skimming Well Technologies in the Indus Basin of Pakistan. <i>Irrigation and Drainage Systems</i> , 2002, 16, 139-160.	0.5	11
57	Modelling effects of spatial variability of saturated hydraulic conductivity on autocorrelated overland flow data: linear mixed model approach. <i>Stochastic Environmental Research and Risk Assessment</i> , 2008, 22, 67-82.	1.9	11
58	Modelling spatial and temporal variations of annual suspended sediment yields from small agricultural catchments. <i>Science of the Total Environment</i> , 2018, 619-620, 672-684.	3.9	11
59	Unit hydrograph estimation with multiple events and prior information: I. Theory and a computer program. <i>Hydrological Sciences Journal</i> , 1992, 37, 429-443.	1.2	10
60	Towards a nonlinear radar-gauge adjustment of radar via a piece-wise method. <i>Meteorological Applications</i> , 2014, 21, 675-683.	0.9	10
61	Effect of low-head dams on reach-scale suspended sediment dynamics in coarse-bedded streams. <i>Journal of Environmental Management</i> , 2021, 277, 111452.	3.8	10
62	Incremental distributed modelling investigation in a small agricultural catchment: 2. Erosion and phosphorus transport. <i>Hydrological Processes</i> , 2007, 21, 92-102.	1.1	9
63	Water quality monitoring during the construction of the M3 motorway in Ireland. <i>Water and Environment Journal</i> , 2012, 26, 175-183.	1.0	9
64	Using radar information in hydrological modeling: COST 717 WG-1 activities. <i>Physics and Chemistry of the Earth</i> , 2000, 25, 1305-1310.	0.3	8
65	Statistical analysis of the effects on overland flow of spatial variability in soil hydraulic conductivity / Analyse statistique des effets de la variabilité spatiale de la conductivité hydraulique du sol sur l'écoulement de surface. <i>Hydrological Sciences Journal</i> , 2008, 53, 387-400.	1.2	8
66	Response surface optimization of phosphorus species adsorption onto powdered alum sludge. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2008, 43, 1100-1107.	0.9	8
67	Detection of trends in the 7-day sustained low-flow time series of Irish rivers. <i>Hydrological Sciences Journal</i> , 2017, 62, 947-959.	1.2	8
68	Uptake and Dissemination of Multi-Criteria Decision Support Methods in Civil Engineering – Lessons from the Literature. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2940.	1.3	8
69	Nutrient load apportionment to support the identification of appropriate water framework directive measures. <i>Biology and Environment</i> , 2016, 116B, 245.	0.2	8
70	Methodology and Application of the Combined SWAT-HSPF Model. <i>Environmental Processes</i> , 2016, 3, 645-661.	1.7	7
71	Coarse sediment dynamics and low-head dams: Monitoring instantaneous bedload transport using a stationary RFID antenna. <i>Journal of Environmental Management</i> , 2021, 300, 113671.	3.8	7
72	Unit hydrograph estimation with multiple events and prior information: II. Evaluation of the method. <i>Hydrological Sciences Journal</i> , 1992, 37, 445-462.	1.2	6

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73	Simulation of Hydrosalinity Behavior Under Skimming Wells. Irrigation and Drainage Systems, 2004, 18, 167-200.	0.5	6
74	Developing an independent, generic, phosphorus modelling component for use with grid-oriented, physically based distributed catchment models. Water Science and Technology, 2005, 51, 135-142.	1.2	6
75	Integrating the implementation of the European Union Water Framework Directive and Floods Directive in Ireland. Water Science and Technology, 2011, 64, 2044-2051.	1.2	6
76	The value of a desk study for building a national river obstacle inventory. River Research and Applications, 2018, 34, 1085-1094.	0.7	6
77	Managing the small stream network for improved water quality, biodiversity and ecosystem services protection (SSNet). Research Ideas and Outcomes, 0, 5, .	1.0	6
78	Options for Skimming Fresh Groundwater in the Indus Basin of Pakistan: A Review. Journal of Groundwater Hydrology, 2003, 45, 259-278.	0.1	5
79	A Bayesian Modelling Framework for Integration of Ecosystem Services into Freshwater Resources Management. Environmental Management, 2022, 69, 781-800.	1.2	5
80	An evaluation of urban flood estimation methodologies in Ireland. Water and Environment Journal, 2010, 24, 49-57.	1.0	3
81	Catchment Characterisation Tool: Prioritising Critical Source Areas for managing diffuse nitrate pollution. Environmental Modeling and Assessment, 2020, 25, 23-39.	1.2	3
82	HYDROLOGY AND THE WATER FRAMEWORK DIRECTIVE IN IRELAND. Biology and Environment, 2009, 109, 207-220.	0.2	3
83	&lt;i>&gt;Preface&lt;/i> Towards practical applications in ensemble hydro-meteorological forecasting. Advances in Geosciences, 0, 29, 119-121.	12.0	3
84	Derivation of a fuzzy national phosphorus export model using 84 Irish catchments. Science of the Total Environment, 2013, 443, 539-548.	3.9	2
85	Overview of Forecast Communication and Use of Ensemble Hydrometeorological Forecasts. , 2019, , 1037-1045.		2
86	Loose One-Way Coupling of Land Use and Nutrient Emission Models to Assess Effects of Regional Development Scenarios on Catchment Water Quality. Environmental Modeling and Assessment, 2020, 25, 591-607.	1.2	2
87	Assessing the applicability of the Revised Universal Soil Loss Equation (RUSLE) to Irish Catchments. Proceedings of the International Association of Hydrological Sciences, 0, 367, 99-105.	1.0	2
88	Nutrient load apportionment to support the identification of appropriate water framework directive measures. Biology and Environment, 2016, 116B, 245-263.	0.2	2
89	Improved semi-distributed model for phosphorus losses from Irish catchments. Environmental Technology (United Kingdom), 2014, 35, 2506-2519.	1.2	1
90	Geographic Information System-based tools in environmental management. International Journal of Environmental Studies, 2014, 71, 526-533.	0.7	1

#	ARTICLE	IF	CITATIONS
91	Introduction to Decision Support Systems. , 2005, , 235-248.		1