

# Benjamin L Ruddell

## List of Publications by Year in descending order

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Version: 2024-02-01

90  
papers

3,152  
citations

147801

31  
h-index

175258

52  
g-index

105  
all docs

105  
docs citations

105  
times ranked

4387  
citing authors

#	ARTICLE	IF	CITATIONS
1	A synthetic water distribution network model for urban resilience. Sustainable and Resilient Infrastructure, 2022, 7, 333-347.	2.8	7
2	The Three Colorado Rivers: Hydrologic, Infrastructural, and Economic Flows of Water in a Shared River Basin. Journal of the American Water Resources Association, 2022, 58, 269-281.	2.4	2
3	Strength and Memory of Precipitation's Control Over Streamflow Across the Conterminous United States. Water Resources Research, 2022, 58, .	4.2	3
4	Mapping local food self-sufficiency in the U.S. and the tradeoffs for food system diversity. Applied Geography, 2022, 143, 102687.	3.7	4
5	Building a Global Ecosystem Research Infrastructure to Address Global Grand Challenges for Macrosystem Ecology. Earth's Future, 2022, 10, .	6.3	10
6	Water Use Data in the United States: Challenges and Future Directions. Journal of the American Water Resources Association, 2022, 58, 485-495.	2.4	8
7	Indicators of hydro-ecological alteration for the rivers of the United States. Ecological Indicators, 2021, 120, 106908.	6.3	17
8	Earth's Imperiled Rivers and Streams. , 2021, , .		0
9	Novel metrics for relating personal heat exposure to social risk factors and outdoor ambient temperature. Environment International, 2021, 146, 106271.	10.0	28
10	Reanalysis of Water Withdrawal for Irrigation, Electric Power, and Public Supply Sectors in the Conterminous United States, 1950–2016. Water Resources Research, 2021, 57, e2020WR027751.	4.2	8
11	The FEWSION for Community Resilience (F4R) Process: Building Local Technical and Social Capacity for Critical Supply Chain Resilience. Frontiers in Environmental Science, 2021, 9, .	3.3	4
12	Technical note: “Bit by bit” a practical and general approach for evaluating model computational complexity vs. model performance. Hydrology and Earth System Sciences, 2021, 25, 1103-1115.	4.9	4
13	Synergies Among Environmental Science Research and Monitoring Networks: A Research Agenda. Earth's Future, 2021, 9, e2020EF001631.	6.3	5
14	Multilayer Network Clarifies Prevailing Water Consumption Telecouplings in the United States. Water Resources Research, 2021, 57, e2020WR029141.	4.2	4
15	Supply chain diversity buffers cities against food shocks. Nature, 2021, 595, 250-254.	27.8	32
16	Developing Climate Resilience in Aridlands Using Rock Detention Structures as Green Infrastructure. Sustainability, 2021, 13, 11268.	3.2	5
17	Guidance on the usability-privacy tradeoff for utility customer data aggregation. Utilities Policy, 2020, 67, 101106.	4.0	10
18	Citizen-Led Community Innovation for Food Energy Water Nexus Resilience. Frontiers in Environmental Science, 2020, 8, .	3.3	8

#	ARTICLE	IF	CITATIONS
19	Debates: Does Information Theory Provide a New Paradigm for Earth Science? Sharper Predictions Using Occam's Digital Razor. <i>Water Resources Research</i> , 2020, 56, e2019WR026471.	4.2	12
20	River ecosystem conceptual models and non-perennial rivers: A critical review. <i>Wiley Interdisciplinary Reviews: Water</i> , 2020, 7, e1473.	6.5	37
21	Full Domestic Supply Chains of Blue Virtual Water Flows Estimated for Major U.S. Cities. <i>Water Resources Research</i> , 2020, 56, e2019WR026190.	4.2	21
22	A Systems Approach to Municipal Water Portfolio Security: A Case Study of the Phoenix Metropolitan Area. <i>Water (Switzerland)</i> , 2020, 12, 1663.	2.7	3
23	Debates—Does Information Theory Provide a New Paradigm for Earth Science? Causality, Interaction, and Feedback. <i>Water Resources Research</i> , 2020, 56, e2019WR024940.	4.2	37
24	Water scarcity and fish imperilment driven by beef production. <i>Nature Sustainability</i> , 2020, 3, 319-328.	23.7	73
25	Does Information Theory Provide a New Paradigm for Earth Science? Hypothesis Testing. <i>Water Resources Research</i> , 2020, 56, e2019WR024918.	4.2	33
26	Reducing water scarcity by improving water productivity in the United States. <i>Environmental Research Letters</i> , 2020, 15, 094033.	5.2	29
27	Applying Science to Practice. <i>AESS Interdisciplinary Environmental Studies and Sciences Series</i> , 2020, , 459-482.	0.2	0
28	The U.S. food–energy–water system: A blueprint to fill the mesoscale gap for science and decision-making. <i>Ambio</i> , 2019, 48, 251-263.	5.5	16
29	Information Theory for Model Diagnostics: Structural Error is Indicated by Trade-Off Between Functional and Predictive Performance. <i>Water Resources Research</i> , 2019, 55, 6534-6554.	4.2	29
30	Developing knowledge systems for urban resilience to cloudburst rain events. <i>Environmental Science and Policy</i> , 2019, 99, 150-159.	4.9	48
31	Robust observations of land-to-atmosphere feedbacks using the information flows of FLUXNET. <i>Npj Climate and Atmospheric Science</i> , 2019, 2, .	6.8	28
32	The Development of the INFEWS-ER: A Virtual Resource Center for Transdisciplinary Graduate Student Training at the Nexus of Food, Energy, and Water. <i>Frontiers in Environmental Science</i> , 2019, 7, .	3.3	13
33	Cities of the Southwest are testbeds for urban resilience. <i>Frontiers in Ecology and the Environment</i> , 2019, 17, 79-80.	4.0	10
34	Anticipating global terrestrial ecosystem state change using FLUXNET. <i>Global Change Biology</i> , 2019, 25, 2352-2367.	9.5	11
35	Homogenization of plant diversity, composition, and structure in North American urban yards. <i>Ecosphere</i> , 2018, 9, e02105.	2.2	68
36	Investigating the mechanisms responsible for the lack of surface energy balance closure in a central Amazonian tropical rainforest. <i>Agricultural and Forest Meteorology</i> , 2018, 255, 92-103.	4.8	24

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37	Do energy retrofits work? Evidence from commercial and residential buildings in Phoenix. <i>Journal of Environmental Economics and Management</i> , 2018, 92, 726-743.	4.7	53
38	HESS Opinions: How should a future water census address consumptive use? (And where can we) <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50</i>	4.9	7
39	Threshold Based Footprints (for Water). <i>Water (Switzerland)</i> , 2018, 10, 1029.	2.7	2
40	Interdependent Infrastructure as Linked Social, Ecological, and Technological Systems (SETSs) to Address Lockâ€in and Enhance Resilience. <i>Earth's Future</i> , 2018, 6, 1638-1659.	6.3	153
41	Benchmarking and Process Diagnostics of Land Models. <i>Journal of Hydrometeorology</i> , 2018, 19, 1835-1852.	1.9	41
42	Convective suppression before and during the United States Northern Great Plains flash drought of 2017. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 4155-4163.	4.9	46
43	Scaling properties of food flow networks. <i>PLoS ONE</i> , 2018, 13, e0199498.	2.5	26
44	Water Distribution System Failure Risks with Increasing Temperatures. <i>Environmental Science &amp; Technology</i> , 2018, 52, 9605-9614.	10.0	23
45	A spatially detailed blue water footprint of the United States economy. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 3007-3032.	4.9	36
46	The foodâ€energyâ€water nexus: Transforming science for society. <i>Water Resources Research</i> , 2017, 53, 3550-3556.	4.2	180
47	US cities can manage national hydrology and biodiversity using local infrastructure policy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 9581-9586.	7.1	23
48	Electricity demand planning forecasts should consider climate non-stationarity to maintain reserve margins during heat waves. <i>Applied Energy</i> , 2017, 206, 267-277.	10.1	33
49	Water Footprint of 65 Midâ€to Largeâ€Sized U.S. Cities and Their Metropolitan Areas. <i>Journal of the American Water Resources Association</i> , 2017, 53, 1147-1163.	2.4	17
50	Moving Towards a New Urban Systems Science. <i>Ecosystems</i> , 2017, 20, 38-43.	3.4	63
51	Identifying CO2 advection on a hill slope using information flow. <i>Agricultural and Forest Meteorology</i> , 2017, 232, 265-278.	4.8	20
52	Enhancing the T-shaped learning profile when teaching hydrology using data, modeling, and visualization activities. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 1289-1299.	4.9	19
53	The vulnerability and resilience of a city's water footprint: The case of Flagstaff, Arizona, USA. <i>Water Resources Research</i> , 2016, 52, 2698-2714.	4.2	55
54	Developing the greatest Blue Economy: Water productivity, fresh water depletion, and virtual water trade in the Great Lakes basin. <i>Earth's Future</i> , 2016, 4, 282-297.	6.3	26

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55	Electric Grid Vulnerabilities to Rising Air Temperatures in Arizona. <i>Procedia Engineering</i> , 2016, 145, 1346-1353.	1.2	15
56	Convergence of microclimate in residential landscapes across diverse cities in the United States. <i>Landscape Ecology</i> , 2016, 31, 101-117.	4.2	78
57	Identifying scale-€emergent, nonlinear, asynchronous processes of wetland methane exchange. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 188-204.	3.0	97
58	A Method of Aggregating Heterogeneous Subgrid Land-Cover Input Data for Multiscale Urban Parameterization. <i>Journal of Applied Meteorology and Climatology</i> , 2016, 55, 1889-1905.	1.5	2
59	Micro-scale urban surface temperatures are related to land-cover features and residential heat related health impacts in Phoenix, AZ USA. <i>Landscape Ecology</i> , 2016, 31, 745-760.	4.2	198
60	Hot playgrounds and children's health: A multiscale analysis of surface temperatures in Arizona, USA. <i>Landscape and Urban Planning</i> , 2016, 146, 29-42.	7.5	69
61	Seasonally varied controls of climate and phenophase on terrestrial carbon dynamics: modeling eco-climate system state using Dynamical Process Networks. <i>Landscape Ecology</i> , 2016, 31, 165-180.	4.2	18
62	The Hydro-Economic Interdependency of Cities: Virtual Water Connections of the Phoenix, Arizona Metropolitan Area. <i>Sustainability</i> , 2015, 7, 8522-8547.	3.2	20
63	Water Footprint of Cities: A Review and Suggestions for Future Research. <i>Sustainability</i> , 2015, 7, 8461-8490.	3.2	85
64	Multiscale Modeling and Evaluation of Urban Surface Energy Balance in the Phoenix Metropolitan Area. <i>Journal of Applied Meteorology and Climatology</i> , 2015, 54, 322-338.	1.5	17
65	Sensor lag correction for mobile urban microclimate measurements. <i>Urban Climate</i> , 2015, 14, 622-635.	5.7	22
66	TraVis - A visualization framework for mobile transect data sets in an urban microclimate context. , 2015, , .		5
67	Grand Challenges for Hydrology Education in the 21st Century. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015, 20, .	1.9	27
68	An ecohydrological approach to conserving urban water through optimized landscape irrigation schedules. <i>Landscape and Urban Planning</i> , 2015, 133, 127-132.	7.5	18
69	Heat-Related Deaths in Hot Cities: Estimates of Human Tolerance to High Temperature Thresholds. <i>International Journal of Environmental Research and Public Health</i> , 2014, 11, 3304-3326.	2.6	92
70	Modelling soil moisture, water partitioning, and plant water stress under irrigated conditions in desert urban areas. <i>Ecohydrology</i> , 2014, 7, 1297-1313.	2.4	14
71	A Multi-€Scale Analysis of Single-€Family Residential Water Use in the Phoenix Metropolitan Area. <i>Journal of the American Water Resources Association</i> , 2014, 50, 448-467.	2.4	43
72	A multi-method and multi-scale approach for estimating city-wide anthropogenic heat fluxes. <i>Atmospheric Environment</i> , 2014, 99, 64-76.	4.1	97

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73	Reducing a semiarid city's peak electrical demand using distributed cold thermal energy storage. <i>Applied Energy</i> , 2014, 134, 35-44.	10.1	45
74	Sustainable long term scientific data publication: Lessons learned from a prototype Observatory Information System for the Illinois River Basin. <i>Environmental Modelling and Software</i> , 2014, 54, 73-87.	4.5	9
75	Embedded resource accounting for coupled natural-human systems: An application to water resource impacts of the western U.S. electrical energy trade. <i>Water Resources Research</i> , 2014, 50, 7957-7972.	4.2	47
76	Seasonal dynamics of a suburban energy balance in Phoenix, Arizona. <i>International Journal of Climatology</i> , 2014, 34, 3863-3880.	3.5	66
77	Relationship between Water Withdrawals and Freshwater Ecosystem Water Scarcity Quantified at Multiple Scales for a Great Lakes Watershed. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2013, 139, 671-681.	2.6	26
78	Generalizing ecological, water and carbon footprint methods and their worldview assumptions using Embedded Resource Accounting. <i>Water Resources and Industry</i> , 2013, 1-2, 77-90.	3.9	24
79	Applying Information Theory in the Geosciences to Quantify Process Uncertainty, Feedback, Scale. <i>Eos</i> , 2013, 94, 56-56.	0.1	24
80	Value intensity of water used for electrical energy generation in the Western U.S.; An application of embedded resource accounting. , 2012, , .		0
81	Work in progress: Constructing a multidisciplinary design project for first-year engineering and Computing students: Traffic Simulation Engineering Design Challenge. , 2012, , .		0
82	Moving university hydrology education forward with community-based geoinformatics, data and modeling resources. <i>Hydrology and Earth System Sciences</i> , 2012, 16, 2393-2404.	4.9	30
83	Quantifying the role of climate and landscape characteristics on hydrologic partitioning and vegetation response. <i>Water Resources Research</i> , 2011, 47, .	4.2	74
84	Information Driven Ecohydrologic Self-Organization. <i>Entropy</i> , 2010, 12, 2085-2096.	2.2	44
85	Ecohydrologic process networks: 1. Identification. <i>Water Resources Research</i> , 2009, 45, .	4.2	154
86	Ecohydrologic process networks: 2. Analysis and characterization. <i>Water Resources Research</i> , 2009, 45, .	4.2	65
87	The role of hydrologic information in reservoir operation " Learning from historical releases. <i>Advances in Water Resources</i> , 2008, 31, 1636-1650.	3.8	76
88	How Reservoirs Were Operated " Exploring the Role of Hydrologic Information. , 2008, , .		0
89	Hydrologic Data Models. , 2005, , 61-79.		1
90	Unified Modeling Language. , 2005, , 9-20.		0