

# Barret Kurylyk

## List of Publications by Year in descending order

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Version: 2024-02-01

57  
papers

2,972  
citations

186265

28  
h-index

168389

53  
g-index

69  
all docs

69  
docs citations

69  
times ranked

2484  
citing authors

#	ARTICLE	IF	CITATIONS
1	The salmonâ€peloton: Hydraulic habitat shifts of adult Atlantic salmon (<sc><i>Salmo salar</i></sc>) due to behavioural thermoregulation. <i>River Research and Applications</i> , 2022, 38, 107-118.	1.7	13
2	Highly Sensitive Plasmonic Fiber-Optic Sensors using Group IV Transition Metal Nitrides: a Numerical Investigation. <i>Plasmonics</i> , 2022, 17, 931-940.	3.4	6
3	Sea-level rise and warming mediate coastal groundwater discharge in the Arctic. <i>Environmental Research Letters</i> , 2022, 17, 045027.	5.2	9
4	CrAssphage as an indicator of groundwater-borne pollution in coastal ecosystems. <i>Environmental Research Communications</i> , 2022, 4, 051001.	2.3	6
5	Inferring Aquitard Hydraulic Conductivity Using Transient Temperatureâ€Depth Profiles Impacted by Ground Surface Warming. <i>Water Resources Research</i> , 2022, 58, .	4.2	2
6	Shallow subsurface heat recycling is a sustainable global space heating alternative. <i>Nature Communications</i> , 2022, 13, .	12.8	9
7	Small atoll fresh groundwater lenses respond to a combination of natural climatic cycles and human modified geology. <i>Science of the Total Environment</i> , 2021, 756, 143838.	8.0	11
8	Understanding multifunctional Bay of Fundy dykelands and tidal wetlands using ecosystem servicesâ€a baseline. <i>Facets</i> , 2021, 6, 1446-1473.	2.4	12
9	Using Heat to Trace Vertical Water Fluxes in Sediment Experiencing Concurrent Tidal Pumping and Groundwater Discharge. <i>Water Resources Research</i> , 2021, 57, e2020WR027904.	4.2	20
10	Invited perspective: What lies beneath a changing Arctic?. <i>Cryosphere</i> , 2021, 15, 479-484.	3.9	32
11	Pore water exchangeâ€driven inorganic carbon export from intertidal salt marshes. <i>Limnology and Oceanography</i> , 2021, 66, 1774-1792.	3.1	32
12	An ecohydrological typology for thermal refuges in streams and rivers. <i>Ecohydrology</i> , 2021, 14, e2295.	2.4	28
13	Droneâ€based characterization of intertidal spring coldâ€water plume dynamics. <i>Hydrological Processes</i> , 2021, 35, e14258.	2.6	8
14	Modeling Reactive Solute Transport in Permafrostâ€Affected Groundwater Systems. <i>Water Resources Research</i> , 2021, 57, e2020WR028771.	4.2	19
15	Saltwater Intrusion Intensifies Coastal Permafrost Thaw. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094776.	4.0	14
16	Permafrost Hydrogeology. , 2021, , 493-523.		3
17	Laboratory-scale assessment of a capillary barrier using fibre optic distributed temperature sensing (FO-DTS). <i>Canadian Geotechnical Journal</i> , 2020, 57, 115-126.	2.8	11
18	Quantitative guidance for efficient vertical flow measurements at the sedimentâ€water interface using temperatureâ€depth profiles. <i>Hydrological Processes</i> , 2020, 34, 649-661.	2.6	13

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19	Guidelines for cold regions groundwater numerical modeling. <i>Wiley Interdisciplinary Reviews: Water</i> , 2020, 7, e1467.	6.5	32
20	Characterization of contrasting flow and thermal regimes in two adjacent subarctic alpine headwaters in Northwest Canada. <i>Hydrological Processes</i> , 2020, 34, 3252-3270.	2.6	4
21	Repeated Subsurface Thermal Profiling to Reveal Temporal Variability in Deep Groundwater Flow Conditions. <i>Water Resources Research</i> , 2020, 56, e2019WR026913.	4.2	10
22	Heat: An Overlooked Tool in the Practicing Hydrogeologist's Toolbox. <i>Ground Water</i> , 2019, 57, 517-524.	1.3	16
23	Engineering challenges of warming. <i>Nature Climate Change</i> , 2019, 9, 807-808.	18.8	1
24	Theory, tools, and multidisciplinary applications for tracing groundwater fluxes from temperature profiles. <i>Wiley Interdisciplinary Reviews: Water</i> , 2019, 6, e1329.	6.5	50
25	Groundwater flow and heat transport for systems undergoing freeze-thaw: Intercomparison of numerical simulators for 2D test cases. <i>Advances in Water Resources</i> , 2018, 114, 196-218.	3.8	91
26	Inferring watershed hydraulics and cold-water habitat persistence using multi-year air and stream temperature signals. <i>Science of the Total Environment</i> , 2018, 636, 1117-1127.	8.0	51
27	A theoretical extension of the soil freezing curve paradigm. <i>Advances in Water Resources</i> , 2018, 111, 319-328.	3.8	26
28	Snowmelt Infiltration and Macropore Flow in Frozen Soils: Overview, Knowledge Gaps, and a Conceptual Framework. <i>Vadose Zone Journal</i> , 2018, 17, 1-15.	2.2	63
29	Rethinking the Use of Seabed Sediment Temperature Profiles to Trace Submarine Groundwater Flow. <i>Water Resources Research</i> , 2018, 54, 4595-4614.	4.2	14
30	Changing groundwater discharge dynamics in permafrost regions. <i>Environmental Research Letters</i> , 2018, 13, 084017.	5.2	101
31	Distinguishing streamflow trends caused by changes in climate, forest cover, and permafrost in a large watershed in northeastern China. <i>Hydrological Processes</i> , 2017, 31, 1938-1951.	2.6	33
32	Heat as a groundwater tracer in shallow and deep heterogeneous media: Analytical solution, spreadsheet tool, and field applications. <i>Hydrological Processes</i> , 2017, 31, 2648-2661.	2.6	38
33	Interpreting Repeated Temperature-Depth Profiles for Groundwater Flow. <i>Water Resources Research</i> , 2017, 53, 8639-8647.	4.2	21
34	Tracking the Subsurface Signal of Decadal Climate Warming to Quantify Vertical Groundwater Flow Rates. <i>Geophysical Research Letters</i> , 2017, 44, 12,244.	4.0	22
35	Groundwater flow estimation using temperature-depth profiles in a complex environment and a changing climate. <i>Science of the Total Environment</i> , 2017, 574, 272-281.	8.0	29
36	Monitoring Changes in Near-Well Hydraulic Conditions as a Means to Assess Aquifer Clogging. <i>Journal of Hydrologic Engineering - ASCE</i> , 2017, 22, 04016057.	1.9	1

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37	Inferring hydraulic properties of alpine aquifers from the propagation of diurnal snowmelt signals. <i>Water Resources Research</i> , 2017, 53, 4271-4285.	4.2	12
38	Influence of a rock glacier spring on the stream energy budget and cold-water refuge in an alpine stream. <i>Hydrological Processes</i> , 2017, 31, 4719-4733.	2.6	28
39	Increasing Winter Baseflow in Response to Permafrost Thaw and Precipitation Regime Shifts in Northeastern China. <i>Water (Switzerland)</i> , 2017, 9, 25.	2.7	38
40	Improved Stefan Equation Correction Factors to Accommodate Sensible Heat Storage during Soil Freezing or Thawing. <i>Permafrost and Periglacial Processes</i> , 2016, 27, 189-203.	3.4	38
41	Scientific briefing: quantifying streambed heat advection associated with groundwater-surface water interactions. <i>Hydrological Processes</i> , 2016, 30, 987-992.	2.6	37
42	Analytical solution and computer program ( <i>FAST</i> ) to estimate fluid fluxes from subsurface temperature profiles. <i>Water Resources Research</i> , 2016, 52, 725-733.	4.2	29
43	Influence of vertical and lateral heat transfer on permafrost thaw, peatland landscape transition, and groundwater flow. <i>Water Resources Research</i> , 2016, 52, 1286-1305.	4.2	102
44	Hydrologic Impacts of Thawing Permafrost—A Review. <i>Vadose Zone Journal</i> , 2016, 15, 1-20.	2.2	544
45	Benchmarking Numerical Freeze/Thaw Models. <i>Energy Procedia</i> , 2015, 76, 301-310.	1.8	31
46	Discussion of "A Simple Thaw-Freeze Algorithm for a Multi-Layered Soil using the Stefan Equation" by Xie and Gough (2013). <i>Permafrost and Periglacial Processes</i> , 2015, 26, 200-206.	3.4	20
47	Shallow groundwater thermal sensitivity to climate change and land cover disturbances: derivation of analytical expressions and implications for stream temperature modeling. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 2469-2489.	4.9	81
48	Preserving, augmenting, and creating cold-water thermal refugia in rivers: concepts derived from research on the Miramichi River, New Brunswick (Canada). <i>Ecohydrology</i> , 2015, 8, 1095-1108.	2.4	129
49	Observed groundwater temperature response to recent climate change. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 4453-4466.	4.9	109
50	Climate change impacts on the temperature and magnitude of groundwater discharge from shallow, unconfined aquifers. <i>Water Resources Research</i> , 2014, 50, 3253-3274.	4.2	127
51	A new analytical solution for assessing climate change impacts on subsurface temperature. <i>Hydrological Processes</i> , 2014, 28, 3161-3172.	2.6	39
52	Streambed temperature dynamics and corresponding heat fluxes in small streams experiencing seasonal ice cover. <i>Journal of Hydrology</i> , 2014, 519, 1441-1452.	5.4	52
53	Climate change impacts on groundwater and soil temperatures in cold and temperate regions: Implications, mathematical theory, and emerging simulation tools. <i>Earth-Science Reviews</i> , 2014, 138, 313-334.	9.1	207
54	Analytical solutions for benchmarking cold regions subsurface water flow and energy transport models: One-dimensional soil thaw with conduction and advection. <i>Advances in Water Resources</i> , 2014, 70, 172-184.	3.8	64

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55	The uncertainty associated with estimating future groundwater recharge: A summary of recent research and an example from a small unconfined aquifer in a northern humid-continental climate. <i>Journal of Hydrology</i> , 2013, 492, 244-253.	5.4	77
56	The mathematical representation of freezing and thawing processes in variably-saturated, non-deformable soils. <i>Advances in Water Resources</i> , 2013, 60, 160-177.	3.8	253
57	Potential surface temperature and shallow groundwater temperature response to climate change: an example from a small forested catchment in east-central New Brunswick (Canada). <i>Hydrology and Earth System Sciences</i> , 2013, 17, 2701-2716.	4.9	79