Barret Kurylyk

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6340626/publications.pdf

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57	2,972	186265 28	168389 53
papers	citations	h-index	g-index

69	69	69	2484
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hydrologic Impacts of Thawing Permafrostâ€"A Review. Vadose Zone Journal, 2016, 15, 1-20.	2.2	544
2	The mathematical representation of freezing and thawing processes in variably-saturated, non-deformable soils. Advances in Water Resources, 2013, 60, 160-177.	3.8	253
3	Climate change impacts on groundwater and soil temperatures in cold and temperate regions: Implications, mathematical theory, and emerging simulation tools. Earth-Science Reviews, 2014, 138, 313-334.	9.1	207
4	Preserving, augmenting, and creating coldâ€water thermal refugia in rivers: concepts derived from research on the Miramichi River, New Brunswick (Canada). Ecohydrology, 2015, 8, 1095-1108.	2.4	129
5	Climate change impacts on the temperature and magnitude of groundwater discharge from shallow, unconfined aquifers. Water Resources Research, 2014, 50, 3253-3274.	4.2	127
6	Observed groundwater temperature response to recent climate change. Hydrology and Earth System Sciences, 2014, 18, 4453-4466.	4.9	109
7	Influence of vertical and lateral heat transfer on permafrost thaw, peatland landscape transition, and groundwater flow. Water Resources Research, 2016, 52, 1286-1305.	4.2	102
8	Changing groundwater discharge dynamics in permafrost regions. Environmental Research Letters, 2018, 13, 084017.	5.2	101
9	Groundwater flow and heat transport for systems undergoing freeze-thaw: Intercomparison of numerical simulators for 2D test cases. Advances in Water Resources, 2018, 114, 196-218.	3.8	91
10	Shallow groundwater thermal sensitivity to climate change and land cover disturbances: derivation of analytical expressions and implications for stream temperature modeling. Hydrology and Earth System Sciences, 2015, 19, 2469-2489.	4.9	81
11	Potential surface temperature and shallow groundwater temperature response to climate change: an example from a small forested catchment in east-central New Brunswick (Canada). Hydrology and Earth System Sciences, 2013, 17, 2701-2716.	4.9	79
12	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. Journal of Hydrology, 2013, 492, 244-253.	5.4	77
13	Analytical solutions for benchmarking cold regions subsurface water flow and energy transport models: One-dimensional soil thaw with conduction and advection. Advances in Water Resources, 2014, 70, 172-184.	3.8	64
14	Snowmelt Infiltration and Macropore Flow in Frozen Soils: Overview, Knowledge Gaps, and a Conceptual Framework. Vadose Zone Journal, 2018, 17, 1-15.	2.2	63
15	Streambed temperature dynamics and corresponding heat fluxes in small streams experiencing seasonal ice cover. Journal of Hydrology, 2014, 519, 1441-1452.	5.4	52
16	Inferring watershed hydraulics and cold-water habitat persistence using multi-year air and stream temperature signals. Science of the Total Environment, 2018, 636, 1117-1127.	8.0	51
17	Theory, tools, and multidisciplinary applications for tracing groundwater fluxes from temperature profiles. Wiley Interdisciplinary Reviews: Water, 2019, 6, e1329.	6.5	50
18	A new analytical solution for assessing climate change impacts on subsurface temperature. Hydrological Processes, 2014, 28, 3161-3172.	2.6	39

#	Article	IF	Citations
19	Improved Stefan Equation Correction Factors to Accommodate Sensible Heat Storage during Soil Freezing or Thawing. Permafrost and Periglacial Processes, 2016, 27, 189-203.	3.4	38
20	Heat as a groundwater tracer in shallow and deep heterogeneous media: Analytical solution, spreadsheet tool, and field applications. Hydrological Processes, 2017, 31, 2648-2661.	2.6	38
21	Increasing Winter Baseflow in Response to Permafrost Thaw and Precipitation Regime Shifts in Northeastern China. Water (Switzerland), 2017, 9, 25.	2.7	38
22	Scientific briefing: quantifying streambed heat advection associated with groundwater-surface water interactions. Hydrological Processes, 2016, 30, 987-992.	2.6	37
23	Distinguishing streamflow trends caused by changes in climate, forest cover, and permafrost in a large watershed in northeastern China. Hydrological Processes, 2017, 31, 1938-1951.	2.6	33
24	Guidelines for coldâ€regions groundwater numerical modeling. Wiley Interdisciplinary Reviews: Water, 2020, 7, e1467.	6.5	32
25	Invited perspective: What lies beneath a changing Arctic?. Cryosphere, 2021, 15, 479-484.	3.9	32
26	Pore water exchangeâ€driven inorganic carbon export from intertidal salt marshes. Limnology and Oceanography, 2021, 66, 1774-1792.	3.1	32
27	Benchmarking Numerical Freeze/Thaw Models. Energy Procedia, 2015, 76, 301-310.	1.8	31
28	Analytical solution and computer program (FAST) to estimate fluid fluxes from subsurface temperature profiles. Water Resources Research, 2016, 52, 725-733.	4.2	29
29	Groundwater flow estimation using temperature-depth profiles in a complex environment and a changing climate. Science of the Total Environment, 2017, 574, 272-281.	8.0	29
30	Influence of a rock glacier spring on the stream energy budget and coldâ€water refuge in an alpine stream. Hydrological Processes, 2017, 31, 4719-4733.	2.6	28
31	An ecohydrological typology for thermal refuges in streams and rivers. Ecohydrology, 2021, 14, e2295.	2.4	28
32	A theoretical extension of the soil freezing curve paradigm. Advances in Water Resources, 2018, 111, 319-328.	3.8	26
33	Tracking the Subsurface Signal of Decadal Climate Warming to Quantify Vertical Groundwater Flow Rates. Geophysical Research Letters, 2017, 44, 12,244.	4.0	22
34	Interpreting Repeated Temperatureâ€Depth Profiles for Groundwater Flow. Water Resources Research, 2017, 53, 8639-8647.	4.2	21
35	Discussion of â€˜A Simple Thawâ€Freeze Algorithm for a Multiâ€Layered Soil using the Stefan Equationâ€™ by Xie and Gough (2013). Permafrost and Periglacial Processes, 2015, 26, 200-206.	3.4	20
36	Using Heat to Trace Vertical Water Fluxes in Sediment Experiencing Concurrent Tidal Pumping and Groundwater Discharge. Water Resources Research, 2021, 57, e2020WR027904.	4.2	20

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37	Modeling Reactive Solute Transport in Permafrostâ€Affected Groundwater Systems. Water Resources Research, 2021, 57, e2020WR028771.	4.2	19
38	Heat: An Overlooked Tool in the Practicing Hydrogeologist's Toolbox. Ground Water, 2019, 57, 517-524.	1.3	16
39	Rethinking the Use of Seabed Sediment Temperature Profiles to Trace Submarine Groundwater Flow. Water Resources Research, 2018, 54, 4595-4614.	4.2	14
40	Saltwater Intrusion Intensifies Coastal Permafrost Thaw. Geophysical Research Letters, 2021, 48, e2021GL094776.	4.0	14
41	Quantitative guidance for efficient vertical flow measurements at the sedimentâ€“water interface using temperatureâ€“depth profiles. Hydrological Processes, 2020, 34, 649-661.	2.6	13
42	The salmonâ€peloton: Hydraulic habitat shifts of adult Atlantic salmon (<scp>Salmo salar</scp>) due to behavioural thermoregulation. River Research and Applications, 2022, 38, 107-118.	1.7	13
43	Inferring hydraulic properties of alpine aquifers from the propagation of diurnal snowmelt signals. Water Resources Research, 2017, 53, 4271-4285.	4.2	12
44	Understanding multifunctional Bay of Fundy dykelands and tidal wetlands using ecosystem servicesâ€”a baseline. Facets, 2021, 6, 1446-1473.	2.4	12
45	Laboratory-scale assessment of a capillary barrier using fibre optic distributed temperature sensing (FO-DTS). Canadian Geotechnical Journal, 2020, 57, 115-126.	2.8	11
46	Small atoll fresh groundwater lenses respond to a combination of natural climatic cycles and human modified geology. Science of the Total Environment, 2021, 756, 143838.	8.0	11
47	Repeated Subsurface Thermal Profiling to Reveal Temporal Variability in Deep Groundwater Flow Conditions. Water Resources Research, 2020, 56, e2019WR026913.	4.2	10
48	Sea-level rise and warming mediate coastal groundwater discharge in the Arctic. Environmental Research Letters, 2022, 17, 045027.	5.2	9
49	Shallow subsurface heat recycling is a sustainable global space heating alternative. Nature Communications, 2022, 13, .	12.8	9
50	Droneâ€based characterization of intertidal spring coldâ€water plume dynamics. Hydrological Processes, 2021, 35, e14258.	2.6	8
51	Highly Sensitive Plasmonic Fiber-Optic Sensors using Group IV Transition Metal Nitrides: a Numerical Investigation. Plasmonics, 2022, 17, 931-940.	3.4	6
52	CrAssphage as an indicator of groundwater-borne pollution in coastal ecosystems. Environmental Research Communications, 2022, 4, 051001.	2.3	6
53	Characterization of contrasting flow and thermal regimes in two adjacent subarctic alpine headwaters in Northwest Canada. Hydrological Processes, 2020, 34, 3252-3270.	2.6	4
54	Permafrost Hydrogeology. , 2021, , 493-523.		3

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55	Inferring Aquitard Hydraulic Conductivity Using Transient Temperatureâ€Depth Profiles Impacted by Ground Surface Warming. Water Resources Research, 2022, 58, .	4.2	2
56	Monitoring Changes in Near-Well Hydraulic Conditions as a Means to Assess Aquifer Clogging. Journal of Hydrologic Engineering - ASCE, 2017, 22, 04016057.	1.9	1
57	Engineering challenges of warming. Nature Climate Change, 2019, 9, 807-808.	18.8	1