Adrian A Harpold

List of Publications by Year
in descending order

64 papers	3,406 citations	147786 31 h-index	144002 57 g-index
76 all docs	76 docs citations	76 times ranked	3903 citing authors

#	Article	IF	Citations
1	Twenty-three unsolved problems in hydrology (UPH) â€“ a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	2.6	474
2	Snowmelt rate dictates streamflow. Geophysical Research Letters, 2016, 43, 8006-8016.	4.0	206
3	Rain or snow: hydrologic processes, observations, prediction, and research needs. Hydrology and Earth System Sciences, 2017, 21, 1-22.	4.9	192
4	Changes in snowpack accumulation and ablation in the intermountain west. Water Resources Research, 2012, 48, .	4.2	146
5	Quantifying the effects of vegetation structure on snow accumulation and ablation in mixedâ€conifer forests. Ecohydrology, 2015, 8, 1073-1094.	2.4	124
6	From Hydrometeorology to River Water Quality: Can a Deep Learning Model Predict Dissolved Oxygen at the Continental Scale?. Environmental Science & Technology, 2021, 55, 2357-2368.	10.0	116
7	How Water, Carbon, and Energy Drive Critical Zone Evolution: The Jemezâ€“Santa Catalina Critical Zone Observatory. Vadose Zone Journal, 2011, 10, 884-899.	2.2	111
8	Changes in snow accumulation and ablation following the Las Conchas Forest Fire, New Mexico, USA. Ecohydrology, 2014, 7, 440-452.	2.4	108
9	Recent tree dieâ€off has little effect on streamflow in contrast to expected increases from historical studies. Water Resources Research, 2015, 51, 9775-9789.	4.2	97
10	Humidity determines snowpack ablation under a warming climate. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1215-1220.	7.1	94
11	Soil moisture response to snowmelt timing in mixedâ€conifer subalpine forests. Hydrological Processes, 2015, 29, 2782-2798.	2.6	92
12	Multiscale observations of snow accumulation and peak snowpack following widespread, insectâ€induced lodgepole pine mortality. Ecohydrology, 2014, 7, 150-162.	2.4	88
13	Increased evaporation following widespread tree mortality limits streamflow response. Water Resources Research, 2014, 50, 5395-5409.	4.2	87
14	Sensitivity of soil water availability to changing snowmelt timing in the western U.S.. Geophysical Research Letters, 2015, 42, 8011-8020.	4.0	78
15	LiDARâ€derived snowpack data sets from mixed conifer forests across the Western United States. Water Resources Research, 2014, 50, 2749-2755.	4.2	75
16	Rare earth elements as reactive tracers of biogeochemical weathering in forested rhyolitic terrain. Chemical Geology, 2015, 391, 19-32.	3.3	67
17	Variation in Root Density along Stream Banks. Journal of Environmental Quality, 2004, 33, 2030-2039.	2.0	64
18	Temperature controls production but hydrology regulates export of dissolved organic carbon at the catchment scale. Hydrology and Earth System Sciences, 2020, 24, 945-966.	4.9	64

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19	Topographically driven differences in energy and water constrain climatic control on forest carbon sequestration. Ecosphere, 2017, 8, e01797.	2.2	61
20	Stream water carbon controls in seasonally snow-covered mountain catchments: impact of inter-annual variability of water fluxes, catchment aspect and seasonal processes. Biogeochemistry, 2014, 118, 273-290.	3.5	60
21	Geochemical evolution of the <scp>C</scp>ritical <scp>Z</scp>one across variable time scales informs concentrationâ€discharge relationships: <scp>J</scp>emez <scp>R</scp>iver <scp>B</scp>asin <scp>C</scp>ritical <scp>Z</scp>one <scp>O</scp>bservatory. Water Resources Research, 2017, 53, 4169-4196.	4.2	57
22	Diverging sensitivity of soil water stress to changing snowmelt timing in the Western U.S.. Advances in Water Resources, 2016, 92, 116-129.	3.8	54
23	Regional sensitivities of seasonal snowpack to elevation, aspect, and vegetation cover in western <scp>N</scp>orth <scp>A</scp>merica. Water Resources Research, 2017, 53, 6908-6926.	4.2	54
24	The relative contributions of alpine and subalpine ecosystems to the water balance of a mountainous, headwater catchment. Hydrological Processes, 2015, 29, 4794-4808.	2.6	51
25	Aerosol and precipitation chemistry in the southwestern United States: spatiotemporal trends and interrelationships. Atmospheric Chemistry and Physics, 2013, 13, 7361-7379.	4.9	49
26	Relative Humidity Has Uneven Effects on Shifts From Snow to Rain Over the Western U.S.. Geophysical Research Letters, 2017, 44, 9742-9750.	4.0	43
27	Performance Assessment of Optical Satellite-Based Operational Snow Cover Monitoring Algorithms in Forested Landscapes. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 7159-7178.	4.9	41
28	Streams as Mirrors: Reading Subsurface Water Chemistry From Stream Chemistry. Water Resources Research, 2022, 58, e2021WR029931.	4.2	41
29	Investigating a high resolution, stream chloride time series from the Biscuit Brook catchment, Catskills, NY. Journal of Hydrology, 2008, 348, 245-256.	5.4	38
30	Laser vision: lidar as a transformative tool to advance critical zone science. Hydrology and Earth System Sciences, 2015, 19, 2881-2897.	4.9	37
31	Watershed-scale mapping of fractional snow cover under conifer forest canopy using lidar. Remote Sensing of Environment, 2019, 222, 34-49.	11.0	33
32	Climate Controls on River Chemistry. Earth's Future, 2022, 10, .	6.3	28
33	Testing and Improving Temperature Thresholds for Snow and Rain Prediction in the Western United States. Journal of the American Water Resources Association, 2016, 52, 1142-1154.	2.4	27
34	Does Including Soil Moisture Observations Improve Operational Streamflow Forecasts in Snowâ€Dominated Watersheds?. Journal of the American Water Resources Association, 2017, 53, 179-196.	2.4	27
35	Potential for Changing Extreme Snowmelt and Rainfall Events in the Mountains of the Western United States. Journal of Geophysical Research D: Atmospheres, 2017, 122, 13,219.	3.3	25
36	Now you see it, now you don't: a case study of ephemeral snowpacks and soil moisture response in the Great Basin, USA. Hydrology and Earth System Sciences, 2018, 22, 4891-4906.	4.9	25

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37	Partitioning snowmelt and rainfall in the critical zone: effects of climate type and soil properties. Hydrology and Earth System Sciences, 2019, 23, 3553-3570.	4.9	25
38	Why does snowmelt-driven streamflow response to warming vary? A data-driven review and predictive framework. Environmental Research Letters, 2022, 17, 053004.	5.2	25
39	The Hydrological Effects of Lateral Preferential Flow Paths in a Glaciated Watershed in the Northeastern USA. Vadose Zone Journal, 2010, 9, 397-414.	2.2	24
40	Estimating the Effects of Forest Structure Changes From Wildfire on Snow Water Resources Under Varying Meteorological Conditions. Water Resources Research, 2020, 56, e2020WR027071.	4.2	24
41	Stream Discharge Measurement Using a Large-Scale Particle Image Velocimetry (LSPIV) Prototype. Transactions of the ASABE, 2006, 49, 1791-1805.	1.1	21
42	Snowmelt causes different limitations on transpiration in a Sierra Nevada conifer forest. Agricultural and Forest Meteorology, 2020, 291, 108089.	4.8	21
43	Using Process Based Snow Modeling and Lidar to Predict the Effects of Forest Thinning on the Northern Sierra Nevada Snowpack. Frontiers in Forests and Global Change, 2020, 3, .	2.3	19
44	A net ecosystem carbon budget for snow dominated forested headwater catchments: linking water and carbon fluxes to critical zone carbon storage. Biogeochemistry, 2018, 138, 225-243.	3.5	17
45	Drivers and projections of ice phenology in mountain lakes in the western United States. Limnology and Oceanography, 2021, 66, 995-1008.	3.1	17
46	Impacts of Sampling Dissolved Organic Matter with Passive Capillary Wicks Versus Aqueous Soil Extraction. Soil Science Society of America Journal, 2012, 76, 2019-2030.	2.2	16
47	Direct Channel Precipitation and Storm Characteristics Influence Shortâ€Term Fallout Radionuclide Assessment of Sediment Source. Water Resources Research, 2018, 54, 4579-4594.	4.2	16
48	Patterns and Drivers of Atmospheric River Precipitation and Hydrologic Impacts across the Western United States. Journal of Hydrometeorology, 2020, 21, 143-159.	1.9	16
49	Increasing the efficacy of forest thinning for snow using highâ€resolution modeling: A proof of concept in the Lake Tahoe Basin, California, USA. Ecohydrology, 2020, 13, e2203.	2.4	15
50	The sensitivity of snow ephemerality to warming climate across an arid to montane vegetation gradient. Ecohydrology, 2019, 12, e2060.	2.4	12
51	Relating hydrogeomorphic properties to stream buffering chemistry in the Neversink River watershed, New York State, USA. Hydrological Processes, 2010, 24, 3759-3771.	2.6	11
52	Unraveling the Controls on Snow Disappearance in Montane Conifer Forests Using Multiâ€Site Lidar. Water Resources Research, 2021, 57, .	4.2	11
53	Bias Correction of Airborne Thermal Infrared Observations Over Forests Using Melting Snow. Water Resources Research, 2019, 55, 11331-11343.	4.2	10
54	Accounting for Fineâ€Scale Forest Structure is Necessary to Model Snowpack Mass and Energy Budgets in Montane Forests. Water Resources Research, 2021, 57, e2021WR029716.	4.2	10

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55	Riparian zones attenuate nitrogen loss following bark beetleâ€induced lodgepole pine mortality. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 933-948.	3.0	9
56	Drivers of Dissolved Organic Carbon Mobilization From Forested Headwater Catchments: A Multi Scaled Approach. Frontiers in Water, 2021, 3, .	2.3	8
57	Growing new generations of critical zone scientists. Earth Surface Processes and Landforms, 2017, 42, 2498-2502.	2.5	7
58	Spruce Beetle Outbreak Increases Streamflow From Snowâ€Dominated Basins in Southwest Colorado, USA. Water Resources Research, 2022, 58, .	4.2	6
59	Using Lidar to Advance Critical Zone Science. Eos, 2014, 95, 364-364.	0.1	4
60	Diel streamflow cycles suggest more sensitive snowmelt-driven streamflow to climate change than land surface modeling does. Hydrology and Earth System Sciences, 2022, 26, 3393-3417.	4.9	3
61	Variation in Root Density along Stream Banks. , 2004, , 400.		2
62	Hydrogeomorphology explains acidification-driven variation in aquatic biological communities in the Neversink Basin, USA. , 2013, 23, 791-800.		2
63	Corrigendum to "Laser vision: lidar as a transformative tool to advance critical zone science" published in Hydrol. Earth Syst. Sci., 19, 2881â€"2897, 2015. Hydrology and Earth System Sciences, 2015, 19, 2943-2943.	4.9	1
64	Variation in Root Density Along Stream Banks. , 2003, , .		0