Anna K Liljedahl

List of Publications by Year
in descending order

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41 papers	1,894 citations	331538 21 h-index	345118 36 g-index
54 all docs	54 docs citations	54 times ranked	2689 citing authors

#	Article	IF	Citations
1	Pan-Arctic ice-wedge degradation in warming permafrost and its influence on tundra hydrology. Nature Geoscience, 2016, 9, 312-318.	5.4	527
2	Cold season emissions dominate the Arctic tundra methane budget. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 40-45.	3.3	278
3	Nonlinear controls on evapotranspiration in arctic coastal wetlands. Biogeosciences, 2011, 8, 3375-3389.	1.3	93
4	Deep Convolutional Neural Networks for Automated Characterization of Arctic Ice-Wedge Polygons in Very High Spatial Resolution Aerial Imagery. Remote Sensing, 2018, 10, 1487.	1.8	83
5	Interactions between soil thermal and hydrological dynamics in the response of Alaska ecosystems to fire disturbance. Journal of Geophysical Research, 2009, 114, .	3.3	72
6	Depth, ice thickness, and iceâ€out timing cause divergent hydrologic responses among Arctic lakes. Water Resources Research, 2015, 51, 9379-9401.	1.7	66
7	Using field observations to inform thermal hydrology models of permafrost dynamics with ATS (v0.83). Geoscientific Model Development, 2015, 8, 2701-2722.	1.3	56
8	Large CO₂ and CH₄ emissions from polygonal tundra during spring thaw in northern Alaska. Geophysical Research Letters, 2017, 44, 504-513.	1.5	53
9	Extrapolating active layer thickness measurements across Arctic polygonal terrain using LiDAR and NDVI data sets. Water Resources Research, 2014, 50, 6339-6357.	1.7	51
10	Physical short-term changes after a tussock tundra fire, Seward Peninsula, Alaska. Journal of Geophysical Research, 2007, 112, .	3.3	43
11	Glacierized headwater streams as aquifer recharge corridors, subarctic Alaska. Geophysical Research Letters, 2017, 44, 6876-6885.	1.5	40
12	Use of Very High Spatial Resolution Commercial Satellite Imagery and Deep Learning to Automatically Map Ice-Wedge Polygons across Tundra Vegetation Types. Journal of Imaging, 2020, 6, 137.	1.7	39
13	Degrading permafrost mapped with electrical resistivity tomography, airborne imagery and LiDAR, and seasonal thaw measurements. Geophysics, 2016, 81, WA71-WA85.	1.4	34
14	Transferability of the Deep Learning Mask R-CNN Model for Automated Mapping of Ice-Wedge Polygons in High-Resolution Satellite and UAV Images. Remote Sensing, 2020, 12, 1085.	1.8	33
15	Recent Extreme Runoff Observations From Coastal Arctic Watersheds in Alaska. Water Resources Research, 2017, 53, 9145-9163.	1.7	32
16	Understanding the synergies of deep learning and data fusion of multispectral and panchromatic high resolution commercial satellite imagery for automated ice-wedge polygon detection. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 170, 174-191.	4.9	32
17	Detection and Assessment of a Large and Potentially Tsunamigenic Periglacial Landslide in Barry Arm, Alaska. Geophysical Research Letters, 2020, 47, e2020GL089800.	1.5	30
18	Mapping snow depth within a tundra ecosystem using multiscale observations and Bayesian methods. Cryosphere, 2017, 11, 857-875.	1.5	28

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19	Tundra water budget and implications of precipitation underestimation. Water Resources Research, 2017, 53, 6472-6486.	1.7	26
20	Regional Patterns and Asynchronous Onset of Ice-Wedge Degradation since the Mid-20th Century in Arctic Alaska. Remote Sensing, 2018, 10, 1312.	1.8	25
21	Delayed responses of an Arctic ecosystem to an extreme summer: impacts on net ecosystem exchange and vegetation functioning. Biogeosciences, 2014, 11, 5877-5888.	1.3	24
22	Ice roads through lake-rich Arctic watersheds: Integrating climate uncertainty and freshwater habitat responses into adaptive management. Arctic, Antarctic, and Alpine Research, 2019, 51, 9-23.	0.4	22
23	Understanding the Effects of Optimal Combination of Spectral Bands on Deep Learning Model Predictions: A Case Study Based on Permafrost Tundra Landform Mapping Using High Resolution Multispectral Satellite Imagery. Journal of Imaging, 2020, 6, 97.	1.7	22
24	The Roles of Climate Extremes, Ecological Succession, and Hydrology in Repeated Permafrost Aggradation and Degradation in Fens on the Tanana Flats, Alaska. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2020JG005824.	1.3	22
25	Decadal-scale hotspot methane ebullition within lakes following abrupt permafrost thaw. Environmental Research Letters, 2021, 16, 035010.	2.2	21
26	A lake-centric geospatial database to guide research and inform management decisions in an Arctic watershed in northern Alaska experiencing climate and land-use changes. Ambio, 2017, 46, 769-786.	2.8	19
27	An Object-Based Approach for Mapping Tundra Ice-Wedge Polygon Troughs from Very High Spatial Resolution Optical Satellite Imagery. Remote Sensing, 2021, 13, 558.	1.8	17
28	Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986.	1.6	16
29	Arctic riparian shrub expansion indicates a shift from streams gaining water to those that lose flow. Communications Earth & Environment, 2020, 1, .	2.6	15
30	Landscape impacts of 3Dâ€seismic surveys in the Arctic National Wildlife Refuge, Alaska. Ecological Applications, 2020, 30, e02143.	1.8	15
31	The Polar WRF Downscaled Historical and Projected Twenty-First Century Climate for the Coast and Foothills of Arctic Alaska. Frontiers in Earth Science, 0, 5, .	0.8	13
32	The shifting mosaic of ice-wedge degradation and stabilization in response to infrastructure and climate change, Prudhoe Bay Oilfield, Alaska, USA. Arctic Science, 2022, 8, 498-530.	0.9	12
33	An Optimal GeoAI Workflow for Pan-Arctic Permafrost Feature Detection from High-Resolution Satellite Imagery. Photogrammetric Engineering and Remote Sensing, 2022, 88, 181-188.	0.3	8
34	Using Synthetic Aperture Radar to Define Spring Breakup on the Kuparuk River, Northern Alaska. Arctic, 2014, 67, 462.	0.2	7
35	Recursive active contours for hierarchical segmentation of wetlands in high-resolution satellite imagery of Arctic landscapes. , 2014, , .		5
36	Report from the International Permafrost Association: The Permafrost Young Researchers Network (PYRN). Permafrost and Periglacial Processes, 2009, 20, 417-419.	1.5	3

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37	Glaciers and climate of the Upper Susitna basin, Alaska. Earth System Science Data, 2020, 12, 403-427.	3.7	1
38	Use of Commercial Satellite Imagery to Monitor Changing Arctic Polygonal Tundra. Photogrammetric Engineering and Remote Sensing, 2022, 88, 255-262.	0.3	1
39	Hydrological Model Simulations and Physical Impacts of a Tundra Watershed Affected by Wildfire, Seward Peninsula, Alaska. , 2005, , 1.		0
40	COUNTING ICE-WEDGE POLYGONS FROM SPACE: USE OF COMMERCIAL SATELLITE IMAGERY TO MONITOR CHANGING ARCTIC POLYGONAL TUNDRA. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLIV-M-3-2021, 67-72.	0.2	0
41	Modeled streamflow response to scenarios of tundra lake water withdrawal and seasonal climate extremes, Arctic Coastal Plain, Alaska. Water Resources Research, 0, , .	1.7	0