Sebastian Westermann

List of Publications by Year
in descending order

95	5,747	81434	97045
papers	citations	41 h-index	71 g-index

117	117	117	6367
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Subpixel heterogeneity of ice-wedge polygonal tundra: a multi-scale analysis of land cover and evapotranspiration in the Lena River Delta, Siberia. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 17301.	0.8	94
2	Standardized monitoring of permafrost thaw: a user-friendly, multiparameter protocol. Arctic Science, 2022, 8, 153-182.	0.9	9
3	A strong mitigation scenario maintains climate neutrality of northern peatlands. One Earth, 2022, 5, 86-97.	3.6	14
4	Permafrost in monitored unstable rock slopes in Norway â€“ new insights from temperature and surface velocity measurements, geophysical surveying, and ground temperature modelling. Earth Surface Dynamics, 2022, 10, 97-129.	1.0	11
5	A new approach to simulate peat accumulation, degradation and stability in a global land surface scheme (JULES vn5.8_accumulate_soil) for northern and temperate peatlands. Geoscientific Model Development, 2022, 15, 1633-1657.	1.3	6
6	Explicitly modelling microtopography in permafrost landscapes in a land surface model (JULES) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542	1.3	6
7	Modeling Panâ€Arctic Peatland Carbon Dynamics Under Alternative Warming Scenarios. Geophysical Research Letters, 2022, 49, .	1.5	7
8	Thermohydrological Impact of Forest Disturbances on Ecosystemâ€Protected Permafrost. Journal of Geophysical Research G: Biogeosciences, 2022, 127, .	1.3	3
9	Population living on permafrost in the Arctic. Population and Environment, 2021, 43, 22-38.	1.3	40
10	Variability of the surface energy balance in permafrost-underlain boreal forest. Biogeosciences, 2021, 18, 343-365.	1.3	19
11	Effects of multi-scale heterogeneity on the simulated evolution of ice-rich permafrost lowlands under a warming climate. Cryosphere, 2021, 15, 1399-1422.	1.5	16
12	Simulating Snow Redistribution and its Effect on Ground Surface Temperature at a Highâ€Arctic Site on Svalbard. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF005673.	1.0	20
13	Consequences of permafrost degradation for Arctic infrastructure â€“ bridging the model gap between regional and engineering scales. Cryosphere, 2021, 15, 2451-2471.	1.5	42
14	Surface temperatures and their influence on the permafrost thermal regime in high-Arctic rock walls on Svalbard. Cryosphere, 2021, 15, 2491-2509.	1.5	7
15	Onshore Thermokarst Primes Subsea Permafrost Degradation. Geophysical Research Letters, 2021, 48, e2021GL093881.	1.5	12
16	Lateral thermokarst patterns in permafrost peat plateaus in northern Norway. Cryosphere, 2021, 15, 3423-3442.	1.5	11
17	Sensitivity of ecosystem-protected permafrost under changing boreal forest structures. Environmental Research Letters, 2021, 16, 084045.	2.2	11
18	Spatial and Temporal Variations of Freezing and Thawing Indices From 1960 to 2020 in Mongolia. Frontiers in Earth Science, 2021, 9, .	0.8	7

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19	Reply to the comment: Northern Hemisphere permafrost extent: Drylands, glaciers and sea floor. Earth-Science Reviews, 2020, 203, 103036.	4.0	1
20	Thermokarst Lake to Lagoon Transitions in Eastern Siberia: Do Submerged Taliks Refreeze?. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005424.	1.0	12
21	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	2.4	646
22	Modeled Microbial Dynamics Explain the Apparent Temperature Sensitivity of Wetland Methane Emissions. Global Biogeochemical Cycles, 2020, 34, e2020GB006678.	1.9	34
23	Fast response of cold ice-rich permafrost in northeast Siberia to a warming climate. Nature Communications, 2020, 11, 2201.	5.8	134
24	Icelandic permafrost dynamics since the Last Glacial Maximum â€“ model results and geomorphological implications. Quaternary Science Reviews, 2020, 233, 106236.	1.4	16
25	Pan-Antarctic map of near-surface permafrost temperatures at 1â€‰km² scale. Cryosphere, 2020, 14, 497-519.	1.5	34
26	Modelling past and future peatland carbon dynamics across the panâ€Arctic. Global Change Biology, 2020, 26, 4119-4133.	4.2	58
27	Evaluating satellite retrieved fractional snow-covered area at a high-Arctic site using terrestrial photography. Remote Sensing of Environment, 2020, 239, 111618.	4.6	39
28	Subsea permafrost carbon stocks and climate change sensitivity estimated by expert assessment. Environmental Research Letters, 2020, 15, 124075.	2.2	34
29	Projecting circum-Arctic excess-ground-ice melt with a sub-grid representation in the Community Land Model. Cryosphere, 2020, 14, 4611-4626.	1.5	8
30	Pathways of ice-wedge degradation in polygonal tundra under different hydrological conditions. Cryosphere, 2019, 13, 1089-1123.	1.5	46
31	Submarine Permafrost Map in the Arctic Modeled Using 1â€Ð Transient Heat Flux (SuPerMAP). Journal of Geophysical Research: Oceans, 2019, 124, 3490-3507.	1.0	55
32	Northern Hemisphere permafrost map based on TTOP modelling for 2000â€“2016 at 1â€¯km2 scale. Earth-Science Reviews, 2019, 193, 299-316.	4.0	462
33	Thaw processes in ice-rich permafrost landscapes represented with laterally coupled tiles in a land surface model. Cryosphere, 2019, 13, 591-609.	1.5	57
34	Heat and Salt Flow in Subsea Permafrost Modeled with CryoGRID2. Journal of Geophysical Research F: Earth Surface, 2019, 124, 920-937.	1.0	28
35	Stability Conditions of Peat Plateaus and Palsas in Northern Norway. Journal of Geophysical Research F: Earth Surface, 2019, 124, 705-719.	1.0	31
36	Improving Permafrost Modeling by Assimilating Remotely Sensed Soil Moisture. Water Resources Research, 2019, 55, 1814-1832.	1.7	22

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37	Hyper-resolution ensemble-based snow reanalysis in mountain regions using clustering. Hydrology and Earth System Sciences, 2019, 23, 4717-4736.	1.9	27
38	Modeling Conductive Heat Flow Between Steep Rock Walls and Talus Slopes â€“ Thermal Processes and Geomorphological Implications. Frontiers in Earth Science, 2019, 7, .	0.8	6
39	Permafrost distribution in steep rock slopes in Norway: measurements, statistical modelling and implications for geomorphological processes. Earth Surface Dynamics, 2019, 7, 1019-1040.	1.0	28
40	Transient Modelling of Permafrost Distribution in Iceland. Frontiers in Earth Science, 2019, 7, .	0.8	20
41	Circumpolar permafrost maps and geohazard indices for near-future infrastructure risk assessments. Scientific Data, 2019, 6, 190037.	2.4	51
42	Contrasting temperature trends across the ice-free part of Greenland. Scientific Reports, 2018, 8, 1586.	1.6	40
43	Sentinel-1 SAR Interferometry for Surface Deformation Monitoring in Low-Land Permafrost Areas. Remote Sensing, 2018, 10, 1360.	1.8	67
44	Degrading permafrost puts Arctic infrastructure at risk by mid-century. Nature Communications, 2018, 9, 5147.	5.8	327
45	Holocene development of subarctic permafrost peatlands in Finnmark, northern Norway. Holocene, 2018, 28, 1855-1869.	0.9	17
46	Ensemble-based assimilation of fractional snow-covered area satellite retrievals to estimate the snow distribution at Arctic sites. Cryosphere, 2018, 12, 247-270.	1.5	40
47	A 20-year record (1998â€“2017) of permafrost, active layer and meteorological conditions at a high Arctic permafrost research site (Bayelva, Spitsbergen). Earth System Science Data, 2018, 10, 355-390.	3.7	47
48	Modelled Distribution and Temporal Evolution of Permafrost in Steep Rock Walls Along a Latitudinal Transect in Norway by CryoGrid 2D. Permafrost and Periglacial Processes, 2017, 28, 172-182.	1.5	30
49	Snow control on active layer thickness in steep alpine rock walls (Aiguille du Midi, 3842ma.s.l., Mont) Tj ETQq1 1 0.784314 rgBT /Ove	2.2	46
50	A Tiling Approach to Represent Subgrid Snow Variability in Coupled Land Surfaceâ€“Atmosphere Models. Journal of Hydrometeorology, 2017, 18, 49-63.	0.7	21
51	An observation-based constraint on permafrost loss as a function of global warming. Nature Climate Change, 2017, 7, 340-344.	8.1	257
52	Progress in space-borne studies of permafrost for climate science: Towards a multi-ECV approach. Remote Sensing of Environment, 2017, 203, 55-70.	4.6	23
53	Permafrost Map for Norway, Sweden and Finland. Permafrost and Periglacial Processes, 2017, 28, 359-378.	1.5	92
54	Terrestrial Remote Sensing of Snowmelt in a Diverse High-Arctic Tundra Environment Using Time-Lapse Imagery. Remote Sensing, 2017, 9, 733.	1.8	23

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55	Transient modeling of the ground thermal conditions using satellite data in the Lena River delta, Siberia. Cryosphere, 2017, 11, 1441-1463.	1.5	41
56	Carbon stocks and fluxes in the high latitudes: using site-level data to evaluate Earth system models. Biogeosciences, 2017, 14, 5143-5169.	1.3	43
57	Strong degradation of palsas and peat plateaus in northern Norway during the last 60Âyears. Cryosphere, 2017, 11, 1-16.	1.5	68
58	Small-scale variation of snow in a regional permafrost model. Cryosphere, 2016, 10, 1201-1215.	1.5	56
59	Monitoring Bedfast Ice and Ice Phenology in Lakes of the Lena River Delta Using TerraSAR-X Backscatter and Coherence Time Series. Remote Sensing, 2016, 8, 903.	1.8	32
60	Simulating the thermal regime and thaw processes of ice-rich permafrost ground with the land-surface model CryoGrid 3. Geoscientific Model Development, 2016, 9, 523-546.	1.3	104
61	Rapid degradation of permafrost underneath waterbodies in tundra landscapesâ€"Toward a representation of thermokarst in land surface models. Journal of Geophysical Research F: Earth Surface, 2016, 121, 2446-2470.	1.0	54
62	Modelling of the thermal regime of permafrost during 1990â€"2014 in Hornsund, Svalbard. Polish Polar Research, 2016, 37, 219-242.	0.9	17
63	A ground temperature map of the North Atlantic permafrost region based on remote sensing and reanalysis data. Cryosphere, 2015, 9, 1303-1319.	1.5	82
64	A Comparison between Simulated and Observed Surface Energy Balance at the Svalbard Archipelago. Journal of Applied Meteorology and Climatology, 2015, 54, 1102-1119.	0.6	16
65	Future permafrost conditions along environmental gradients in Zackenberg, Greenland. Cryosphere, 2015, 9, 719-735.	1.5	51
66	Frozen ponds: production and storage of methane during the Arctic winter in a lowland tundra landscape in northern Siberia, Lena River delta. Biogeosciences, 2015, 12, 977-990.	1.3	58
67	Annual CO₂ budget and seasonal CO₂ exchange signals at a high Arctic permafrost site on Spitsbergen, Svalbard archipelago. Biogeosciences, 2014, 11, 6307-6322.	1.3	43
68	A statistical approach to represent small-scale variability of permafrost temperatures due to snow cover. Cryosphere, 2014, 8, 2063-2074.	1.5	78
69	Low Cost, Mobile Sensor System for Measurement of Carbon Dioxide in Permafrost Areas. Procedia Engineering, 2014, 87, 1318-1321.	1.2	3
70	Permafrost in Alpine Rock Faces from Jotunheimen and Hurrungane, Southern Norway. Permafrost and Periglacial Processes, 2014, 25, 1-13.	1.5	39
71	Climate and environmental change drives Ixodes ricinus geographical expansion at the northern range margin. Parasites and Vectors, 2014, 7, 11.	1.0	107
72	Severe cloud contamination of MODIS Land Surface Temperatures over an Arctic ice cap, Svalbard. Remote Sensing of Environment, 2014, 142, 95-102.	4.6	61

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73	Satellite-based modeling of permafrost temperatures in a tundra lowland landscape. Remote Sensing of Environment, 2013, 135, 12-24.	4.6	91
74	Transient thermal modeling of permafrost conditions in Southern Norway. Cryosphere, 2013, 7, 719-739.	1.5	113
75	CryoGRID 1.0: Permafrost Distribution in Norway estimated by a Spatial Numerical Model. Permafrost and Periglacial Processes, 2013, 24, 2-19.	1.5	63
76	The Distribution, Thermal Characteristics and Dynamics of Permafrost in TrÃ¶llaskagi, Northern Iceland, as Inferred from the Distribution of Rock Glaciers and Iceâ€Cored Moraines. Permafrost and Periglacial Processes, 2013, 24, 322-335.	1.5	60
77	Baseline characteristics of climate, permafrost and land cover from a new permafrost observatory in the Lena River Delta, Siberia (1998â€“2011). Biogeosciences, 2013, 10, 2105-2128.	1.3	144
78	Modelling borehole temperatures in Southern Norway â€“ insights into permafrost dynamics during the 20th and 21st century. Cryosphere, 2012, 6, 553-571.	1.5	49
79	Systematic bias of average winter-time land surface temperatures inferred from MODIS at a site on Svalbard, Norway. Remote Sensing of Environment, 2012, 118, 162-167.	4.6	75
80	Geoelectric observations of the degradation of nearshore submarine permafrost at Barrow (Alaskan) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	3.3	37
81	Permafrost â€“ Physical Aspects, Carbon Cycling, Databases and Uncertainties. , 2012, , 159-185.		20
82	Spatial and temporal variations of summer surface temperatures of high-arctic tundra on Svalbard â€” Implications for MODIS LST based permafrost monitoring. Remote Sensing of Environment, 2011, 115, 908-922.	4.6	97
83	The surface energy balance of a polygonal tundra site in northern Siberia â€“ Part 2: Winter. Cryosphere, 2011, 5, 509-524.	1.5	63
84	The surface energy balance of a polygonal tundra site in northern Siberia â€“ Part 1: Spring to fall. Cryosphere, 2011, 5, 151-171.	1.5	77
85	Modeling the impact of wintertime rain events on the thermal regime of permafrost. Cryosphere, 2011, 5, 945-959.	1.5	95
86	Spatial and temporal variations of summer surface temperatures of wet polygonal tundra in Siberia - implications for MODIS LST based permafrost monitoring. Remote Sensing of Environment, 2010, 114, 2059-2069.	4.6	74
87	Monitoring of active layer dynamics at a permafrost site on Svalbard using multi-channel ground-penetrating radar. Cryosphere, 2010, 4, 475-487.	1.5	56
88	The annual surface energy budget of a high-arctic permafrost site on Svalbard, Norway. Cryosphere, 2009, 3, 245-263.	1.5	104
89	Mechanical Effect of van der Waals Interactions Observed in Real Time in an Ultracold Rydberg Gas. Physical Review Letters, 2007, 98, 023004.	2.9	123
90	Modeling few-body phenomena in an ultracold Rydberg gas. Nuclear Physics A, 2007, 790, 728c-732c.	0.6	5

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91	Prospects of ultracold Rydberg gases for quantum information processing. Fortschritte Der Physik, 2006, 54, 776-787.	1.5	9
92	Coherent excitation of Rydberg atoms in an ultracold gas. Optics Communications, 2006, 264, 293-298.	1.0	62
93	Dynamics of resonant energy transfer in a cold Rydberg gas. European Physical Journal D, 2006, 40, 37-43.	0.6	65
94	Modelling the permafrost distribution in steep rock walls. , 0, , .		4
95	Prospects of Ultracold Rydberg Gases for Quantum Information Processing. , 0, , 227-242.		0