

Martin Hoelzle

List of Publications by Year in descending order

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101
papers

6,566
citations

57758

44
h-index

69250

77
g-index

128
all docs

128
docs citations

128
times ranked

4125
citing authors

#	ARTICLE	IF	CITATIONS
1	Historically unprecedented global glacier decline in the early 21st century. <i>Journal of Glaciology</i> , 2015, 61, 745-762.	2.2	561
2	Permafrost thaw and destabilization of Alpine rock walls in the hot summer of 2003. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	307
3	Six decades of glacier mass-balance observations: a review of the worldwide monitoring network. <i>Annals of Glaciology</i> , 2009, 50, 101-111.	1.4	293
4	Application of inventory data for estimating characteristics of and regional climate-change effects on mountain glaciers: a pilot study with the European Alps. <i>Annals of Glaciology</i> , 1995, 21, 206-212.	1.4	280
5	Alpine glaciers to disappear within decades?. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	276
6	Integrated monitoring of mountain glaciers as key indicators of global climate change: the European Alps. <i>Annals of Glaciology</i> , 2007, 46, 150-160.	1.4	259
7	Borehole deformation measurements and internal structure of some rock glaciers in Switzerland. <i>Permafrost and Periglacial Processes</i> , 2002, 13, 117-135.	3.4	206
8	The new remote-sensing-derived Swiss glacier inventory: II. First results. <i>Annals of Glaciology</i> , 2002, 34, 362-366.	1.4	193
9	Application of inventory data for estimating characteristics of and regional climate-change effects on mountain glaciers: a pilot study with the European Alps. <i>Annals of Glaciology</i> , 1995, 21, 206-212.	1.4	193
10	Surface elevation and mass changes of all Swiss glaciers 1980–2010. <i>Cryosphere</i> , 2015, 9, 525-540.	3.9	182
11	Rock-wall temperatures in the Alps: modelling their topographic distribution and regional differences. <i>Permafrost and Periglacial Processes</i> , 2004, 15, 299-307.	3.4	135
12	Strong spatial variability of snow accumulation observed with helicopter-borne GPR on two adjacent Alpine glaciers. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	125
13	The New Swiss Glacier Inventory SGI2010: Relevance of Using High-Resolution Source Data in Areas Dominated by Very Small Glaciers. <i>Arctic, Antarctic, and Alpine Research</i> , 2014, 46, 933-945.	1.1	122
14	Statistical modelling of mountain permafrost distribution: local calibration and incorporation of remotely sensed data. <i>Permafrost and Periglacial Processes</i> , 2001, 12, 69-77.	3.4	119
15	Surface energy fluxes and distribution models of permafrost in European mountain areas: an overview of current developments. <i>Permafrost and Periglacial Processes</i> , 2001, 12, 53-68.	3.4	115
16	Monitoring mountain permafrost evolution using electrical resistivity tomography: A 7-year study of seasonal, annual, and long-term variations at Schilthorn, Swiss Alps. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	115
17	Miniature temperature dataloggers for mapping and monitoring of permafrost in high mountain areas: first experience from the Swiss Alps. <i>Permafrost and Periglacial Processes</i> , 1999, 10, 113-124.	3.4	111
18	On Rates and Acceleration Trends of Global Glacier Mass Changes. <i>Geografiska Annaler, Series A: Physical Geography</i> , 1999, 81, 585-591.	1.5	106

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19	Permafrost occurrence from BTS measurements and climatic parameters in the eastern Swiss Alps. <i>Permafrost and Periglacial Processes</i> , 1992, 3, 143-147.	3.4	100
20	The thermal regime of the active layer at the Murt�l rock glacier based on data from 2002. <i>Permafrost and Periglacial Processes</i> , 2004, 15, 273-282.	3.4	91
21	Meltwater infiltration into the frozen active layer at an alpine permafrost site. <i>Permafrost and Periglacial Processes</i> , 2010, 21, 325-334.	3.4	91
22	Distributed glacier mass-balance modelling as an important component of modern multi-level glacier monitoring. <i>Annals of Glaciology</i> , 2006, 43, 335-343.	1.4	82
23	Glacier and runoff changes in the Rukhk catchment, upper Amu-Darya basin until 2050. <i>Global and Planetary Change</i> , 2013, 110, 62-73.	3.5	77
24	Cross-Comparison of Albedo Products for Glacier Surfaces Derived from Airborne and Satellite (Sentinel-2 and Landsat 8) Optical Data. <i>Remote Sensing</i> , 2017, 9, 110.	4.0	74
25	The application of Regional Climate Model output for the simulation of high-mountain permafrost scenarios. <i>Global and Planetary Change</i> , 2007, 56, 188-202.	3.5	72
26	Distributed modelling of the regional climatic equilibrium line altitude of glaciers in the European Alps. <i>Global and Planetary Change</i> , 2007, 56, 83-100.	3.5	70
27	Exploring uncertainty in glacier mass balance modelling with Monte Carlo simulation. <i>Cryosphere</i> , 2008, 2, 191-204.	3.9	66
28	Using relict rockglaciers in GIS-based modelling to reconstruct Younger Dryas permafrost distribution patterns in the Err-Julier area, Swiss Alp. <i>Norsk Geografisk Tidsskrift</i> , 2001, 55, 195-202.	0.7	65
29	Application and validation of long-range terrestrial laser scanning to monitor the mass balance of very small glaciers in the Swiss Alps. <i>Cryosphere</i> , 2016, 10, 1279-1295.	3.9	63
30	Methodological approaches to infer end-of-winter snow distribution on alpine glaciers. <i>Journal of Glaciology</i> , 2013, 59, 1047-1059.	2.2	62
31	Simulating the effects of mean annual air-temperature changes on permafrost distribution and glacier size: an example from the Upper Engadin, Swiss Alps. <i>Annals of Glaciology</i> , 1995, 21, 399-405.	1.4	61
32	Re-analysis of seasonal mass balance at Abramov glacier 1968�2014. <i>Journal of Glaciology</i> , 2015, 61, 1103-1117.	2.2	59
33	Cold firn and ice of high-altitude glaciers in the Alps: measurements and distribution modelling. <i>Journal of Glaciology</i> , 2001, 47, 85-96.	2.2	57
34	Sampling and statistical analyses of BTS measurements. <i>Permafrost and Periglacial Processes</i> , 2005, 16, 383-393.	3.4	57
35	GIS-based modelling of rock-ice avalanches from Alpine permafrost areas. <i>Computational Geosciences</i> , 2006, 10, 161-178.	2.4	57
36	Mapping and modelling the occurrence and distribution of mountain permafrost. <i>Norsk Geografisk Tidsskrift</i> , 2001, 55, 186-194.	0.7	56

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37	Permafrost mapping and prospecting in southern Norway. Norsk Geografisk Tidsskrift, 1996, 50, 41-53.	0.7	55
38	Modelling alpine permafrost distribution based on energy-balance data: a first step. Permafrost and Periglacial Processes, 2002, 13, 271-282.	3.4	54
39	Modeled sensitivity of two alpine permafrost sites to RCM-based climate scenarios. Journal of Geophysical Research F: Earth Surface, 2013, 118, 780-794.	2.8	54
40	Mass-balance reconstruction for Glacier No. 354, Tien Shan, from 2003 to 2014. Annals of Glaciology, 2016, 57, 92-102.	1.4	54
41	Mapping and modelling of mountain permafrost distribution in the Alps. Norsk Geografisk Tidsskrift, 1996, 50, 11-15.	0.7	52
42	Interpretation of geothermal profiles perturbed by topography: the alpine permafrost boreholes at Stockhorn Plateau, Switzerland. Permafrost and Periglacial Processes, 2004, 15, 349-357.	3.4	49
43	A model of potential direct solar radiation for investigating occurrences of mountain permafrost. Permafrost and Periglacial Processes, 1992, 3, 139-142.	3.4	48
44	First results and interpretation of energy-flux measurements over Alpine permafrost. Annals of Glaciology, 2000, 31, 275-280.	1.4	48
45	Multi-decadal mass balance series of three Kyrgyz glaciers inferred from modelling constrained with repeated snow line observations. Cryosphere, 2018, 12, 1899-1919.	3.9	48
46	Influence of surface and subsurface heterogeneity on observed borehole temperatures at a mountain permafrost site in the Upper Engadine, Swiss Alps. Cryosphere, 2012, 6, 517-531.	3.9	45
47	New eyes in the sky measure glaciers and ice sheets. Eos, 2000, 81, 265.	0.1	43
48	Very high-elevation Mont Blanc glaciated areas not affected by the 20th century climate change. Journal of Geophysical Research, 2007, 112, .	3.3	41
49	Ground surface temperature scenarios in complex high-mountain topography based on regional climate model results. Journal of Geophysical Research, 2007, 112, .	3.3	40
50	Mass Balance Re-analysis of Findelengletscher, Switzerland; Benefits of Extensive Snow Accumulation Measurements. Frontiers in Earth Science, 2016, 4, .	1.8	40
51	Change detection of bare-ice albedo in the Swiss Alps. Cryosphere, 2019, 13, 397-412.	3.9	40
52	Evidence of accelerated englacial warming in the Monte Rosa area, Switzerland/Italy. Cryosphere, 2011, 5, 231-243.	3.9	39
53	Thermal regime of rock and its relation to snow cover in steep alpine rock walls: gemsstock, central swiss alps. Geografiska Annaler, Series A: Physical Geography, 2015, 97, 579-597.	1.5	39
54	Distinguishing ice-rich and ice-poor permafrost to map ground temperatures and ground ice occurrence in the Swiss Alps. Cryosphere, 2019, 13, 1925-1941.	3.9	39

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55	Vegetation on Alpine rock glacier surfaces: a contribution to abundance and dynamics on extreme plant habitats. <i>Flora: Morphology, Distribution, Functional Ecology of Plants</i> , 2004, 199, 505-515.	1.2	38
56	Towards remote monitoring of sub-seasonal glacier mass balance. <i>Annals of Glaciology</i> , 2013, 54, 75-83.	1.4	34
57	Imaging spectroscopy to assess the composition of ice surface materials and their impact on glacier mass balance. <i>Remote Sensing of Environment</i> , 2015, 168, 388-402.	11.0	33
58	Thirty years of permafrost research in the Corvatschâ€Furtschellas area, Eastern Swiss Alps: A review. <i>Norsk Geografisk Tidsskrift</i> , 2002, 56, 137-145.	0.7	31
59	Distributed snow and rock temperature modelling in steep rock walls using Alpine3D. <i>Cryosphere</i> , 2017, 11, 585-607.	3.9	31
60	Snow as a driving factor of rock surface temperatures in steep rough rock walls. <i>Cold Regions Science and Technology</i> , 2015, 118, 64-75.	3.5	30
61	Mass balance observations and reconstruction for Batysh Sook Glacier, Tien Shan, from 2004 to 2016. <i>Cold Regions Science and Technology</i> , 2017, 135, 76-89.	3.5	30
62	Occurrence of rocky and sedimentary glacier beds in the Swiss Alps as estimated from glacier-inventory data. <i>Annals of Glaciology</i> , 1999, 28, 231-235.	1.4	29
63	Re-establishing glacier monitoring in Kyrgyzstan and Uzbekistan, Central Asia. <i>Geoscientific Instrumentation, Methods and Data Systems</i> , 2017, 6, 397-418.	1.6	29
64	A two-sided approach to estimate heat transfer processes within the active layer of the MurtÃ“Corvatsch rock glacier. <i>Earth Surface Dynamics</i> , 2014, 2, 141-154.	2.4	28
65	Hot Spots of Glacier Mass Balance Variability in Central Asia. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092084.	4.0	26
66	Snowmelt Evolution Mapping Using an Energy Balance Approach over an Alpine Terrain. <i>Arctic, Antarctic, and Alpine Research</i> , 2002, 34, 274-281.	1.1	25
67	Semi-automated calibration method for modelling of mountain permafrost evolution in Switzerland. <i>Cryosphere</i> , 2016, 10, 2693-2719.	3.9	25
68	A spatial and temporal analysis of different periglacial materials by using geoelectrical, seismic and borehole temperature data at MurtÃ“Corvatsch, Upper Engadin, Swiss Alps. <i>Geographica Helvetica</i> , 2013, 68, 265-280.	0.8	25
69	Cold firn in the Mont Blanc and Monte Rosa areas, European Alps: spatial distribution and statistical models. <i>Annals of Glaciology</i> , 2002, 35, 9-18.	1.4	24
70	Implications of climate change on Glacier de la Plaine Morte, Switzerland. <i>Geographica Helvetica</i> , 2013, 68, 227-237.	0.8	23
71	Permafrost distribution modelling in the mountains of the Mediterranean: Corral del Veleta, Sierra Nevada, Spain. <i>Norsk Geografisk Tidsskrift</i> , 2001, 55, 253-260.	0.7	22
72	The state and future of the cryosphere in Central Asia. <i>Water Security</i> , 2020, 11, 100072.	2.5	20

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73	Unlocking annual firn layer water equivalents from ground-penetrating radar data on an Alpine glacier. <i>Cryosphere</i> , 2015, 9, 1075-1087.	3.9	20
74	Simulating the effects of mean annual air-temperature changes on permafrost distribution and glacier size: an example from the Upper Engadin, Swiss Alps. <i>Annals of Glaciology</i> , 1995, 21, 399-405.	1.4	19
75	Best Practice for Measuring Permafrost Temperature in Boreholes Based on the Experience in the Swiss Alps. <i>Frontiers in Earth Science</i> , 2021, 9, .	1.8	18
76	Permafrost research sites in the Alps: Excursions of the international workshop on permafrost and periglacial environments in mountain areas. <i>Permafrost and Periglacial Processes</i> , 1992, 3, 189-202.	3.4	17
77	Installation of a shallow borehole network and monitoring of the ground thermal regime of a high alpine discontinuous permafrost environment, Eastern Swiss Alps. <i>Norsk Geografisk Tidsskrift</i> , 2005, 59, 84-93.	0.7	17
78	Near-surface ventilation as a key for modeling the thermal regime of coarse blocky rock glaciers. <i>Permafrost and Periglacial Processes</i> , 2018, 29, 152-163.	3.4	17
79	Snowmelt Evolution Mapping Using an Energy Balance Approach over an Alpine Terrain. <i>Arctic, Antarctic, and Alpine Research</i> , 2002, 34, 274.	1.1	17
80	Energy balance at a cold Alpine firn saddle, Seserjoch, Monte Rosa. <i>International Journal of Climatology</i> , 2004, 24, 1423-1442.	3.5	14
81	The status and role of the alpine cryosphere in Central Asia. , 2019, , 100-121.		14
82	Geodetic mass balance of Abramov Glacier from 1975 to 2015. <i>Journal of Glaciology</i> , 2021, 67, 331-342.	2.2	13
83	A full Stokes ice-flow model to assist the interpretation of millennial-scale ice cores at the high-Alpine drilling site Colle Gnifetti, Swiss/Italian Alps. <i>Journal of Glaciology</i> , 2020, 66, 35-48.	2.2	11
84	Glacier Monitoring and Capacity Building: Important Ingredients for Sustainable Mountain Development. <i>Mountain Research and Development</i> , 2017, 37, 141-152.	1.0	10
85	Introduction: Global Glacier Monitoring—a Long-Term Task Integrating in Situ Observations and Remote Sensing. , 2014, , 1-21.		8
86	Glacier Runoff Variation Since 1981 in the Upper Naryn River Catchments, Central Tien Shan. <i>Frontiers in Environmental Science</i> , 2022, 9, .	3.3	8
87	Comparison of historical and recent accumulation rates on Abramov Glacier, Pamir Alay. <i>Journal of Glaciology</i> , 2021, 67, 253-268.	2.2	7
88	On the potential use of glacier and permafrost observations for verification of climate models. <i>Annals of Glaciology</i> , 1997, 25, 400-406.	1.4	6
89	Adaptation to climate change induced water stress in major glacierized mountain regions. <i>Climate and Development</i> , 2022, 14, 665-677.	3.9	6
90	On the potential use of glacier and permafrost observations for verification of climate models. <i>Annals of Glaciology</i> , 1997, 25, 400-406.	1.4	5

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91	Permafrost Monitoring in High Mountain Areas Using a Coupled Geophysical and Meteorological Approach. , 2006, , 57-71.		5
92	Firn changes at Colle Gnifetti revealed with a high-resolution process-based physical model approach. Cryosphere, 2021, 15, 3181-3205.	3.9	5
93	Long-term energy balance measurements at three different mountain permafrost sites in the Swiss Alps. Earth System Science Data, 2022, 14, 1531-1547.	9.9	5
94	Integrated glacier monitoring strategies: comments on a recent correspondence. Journal of Glaciology, 2008, 54, 947-948.	2.2	4
95	Reconstructed Centennial Mass Balance Change for Golubin Glacier, Northern Tien Shan. Atmosphere, 2022, 13, 954.	2.3	4
96	Preface: the mountain cryosphere â€“ a holistic view on processes and their interactions. Geografiska Annaler, Series A: Physical Geography, 2012, 94, 177-182.	1.5	3
97	Editorial: Mapping and distribution modelling of mountain permafrost. Norsk Geografisk Tidsskrift, 2001, 55, 185-185.	0.7	0
98	Influence of different digital terrain models (DTMs) on alpine permafrost modeling. Environmental Modeling and Assessment, 2007, 12, 303-313.	2.2	0
99	<i>Editorial</i> Publishing physical geography papers in <i>Geographica Helvetica</i>. Geographica Helvetica, 2013, 68, 225-226.	0.8	0
100	Introduction to the special issue of <i>Geographica Helvetica</i>; "Mapping, measuring and modeling in geomorphology". Geographica Helvetica, 2015, 70, 311-313.	0.8	0
101	Rockglaciers of the Engadine. World Geomorphological Landscapes, 2021, , 235-248.	0.3	0