Martin Hoelzle

List of Publications by Year
in descending order

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101 papers	6,566 citations	57631 44 h-index	69108 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. Journal of Glaciology, 2015, 61, 745-762.	1.1	561
2	Permafrost thaw and destabilization of Alpine rock walls in the hot summer of 2003. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	307
3	Six decades of glacier mass-balance observations: a review of the worldwide monitoring network. Annals of Glaciology, 2009, 50, 101-111.	2.8	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. Annals of Glaciology, 1995, 21, 206-212.	2.8	280
5	Alpine glaciers to disappear within decades?. Geophysical Research Letters, 2006, 33, .	1.5	276
6	Integrated monitoring of mountain glaciers as key indicators of global climate change: the European Alps. Annals of Glaciology, 2007, 46, 150-160.	2.8	259
7	Borehole deformation measurements and internal structure of some rock glaciers in Switzerland. Permafrost and Periglacial Processes, 2002, 13, 117-135.	1.5	206
8	The new remote-sensing-derived Swiss glacier inventory: II. First results. Annals of Glaciology, 2002, 34, 362-366.	2.8	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. Annals of Glaciology, 1995, 21, 206-212.	2.8	193
10	Surface elevation and mass changes of all Swiss glaciers 1980â€“2010. Cryosphere, 2015, 9, 525-540.	1.5	182
11	Rock-wall temperatures in the Alps: modelling their topographic distribution and regional differences. Permafrost and Periglacial Processes, 2004, 15, 299-307.	1.5	135
12	Strong spatial variability of snow accumulation observed with helicopter-borne GPR on two adjacent Alpine glaciers. Geophysical Research Letters, 2006, 33, .	1.5	125
13	The New Swiss Glacier Inventory SGI2010: Relevance of Using High-Resolution Source Data in Areas Dominated by Very Small Glaciers. Arctic, Antarctic, and Alpine Research, 2014, 46, 933-945.	0.4	122
14	Statistical modelling of mountain permafrost distribution: local calibration and incorporation of remotely sensed data. Permafrost and Periglacial Processes, 2001, 12, 69-77.	1.5	119
15	Surface energy fluxes and distribution models of permafrost in European mountain areas: an overview of current developments. Permafrost and Periglacial Processes, 2001, 12, 53-68.	1.5	115
16	Monitoring mountain permafrost evolution using electrical resistivity tomography: A 7â€year study of seasonal, annual, and longâ€term variations at Schilthorn, Swiss Alps. Journal of Geophysical Research, 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. Permafrost and Periglacial Processes, 1999, 10, 113-124.	1.5	111
18	On Rates and Acceleration Trends of Global Glacier Mass Changes. Geografiska Annaler, Series A: Physical Geography, 1999, 81, 585-591.	0.6	106

#	Article	IF	Citations
19	Permafrost occurrence from BTS measurements and climatic parameters in the eastern Swiss Alps. Permafrost and Periglacial Processes, 1992, 3, 143-147.	1.5	100
20	The thermal regime of the active layer at the MurtÃ¨l rock glacier based on data from 2002. Permafrost and Periglacial Processes, 2004, 15, 273-282.	1.5	91
21	Meltwater infiltration into the frozen active layer at an alpine permafrost site. Permafrost and Periglacial Processes, 2010, 21, 325-334.	1.5	91
22	Distributed glacier mass-balance modelling as an important component of modern multi-level glacier monitoring. Annals of Glaciology, 2006, 43, 335-343.	2.8	82
23	Glacier and runoff changes in the Rukhk catchment, upper Amu-Darya basin until 2050. Global and Planetary Change, 2013, 110, 62-73.	1.6	77
24	Cross-Comparison of Albedo Products for Glacier Surfaces Derived from Airborne and Satellite (Sentinel-2 and Landsat 8) Optical Data. Remote Sensing, 2017, 9, 110.	1.8	74
25	The application of Regional Climate Model output for the simulation of high-mountain permafrost scenarios. Global and Planetary Change, 2007, 56, 188-202.	1.6	72
26	Distributed modelling of the regional climatic equilibrium line altitude of glaciers in the European Alps. Global and Planetary Change, 2007, 56, 83-100.	1.6	70
27	Exploring uncertainty in glacier mass balance modelling with Monte Carlo simulation. Cryosphere, 2008, 2, 191-204.	1.5	66
28	Using relict rockglaciers in GIS-based modelling to reconstruct Younger Dryas permafrost distribution patterns in the Err-Julier area, Swiss Alp. Norsk Geografisk Tidsskrift, 2001, 55, 195-202.	0.3	65
29	Application and validation of long-range terrestrial laser scanning to monitor the mass balance of very small glaciers in the Swiss Alps. Cryosphere, 2016, 10, 1279-1295.	1.5	63
30	Methodological approaches to infer end-of-winter snow distribution on alpine glaciers. Journal of Glaciology, 2013, 59, 1047-1059.	1.1	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. Annals of Glaciology, 1995, 21, 399-405.	2.8	61
32	Re-analysis of seasonal mass balance at Abramov glacier 1968â€“2014. Journal of Glaciology, 2015, 61, 1103-1117.	1.1	59
33	Cold firn and ice of high-altitude glaciers in the Alps: measurements and distribution modelling. Journal of Glaciology, 2001, 47, 85-96.	1.1	57
34	Sampling and statistical analyses of BTS measurements. Permafrost and Periglacial Processes, 2005, 16, 383-393.	1.5	57
35	GIS-based modelling of rock-ice avalanches from Alpine permafrost areas. Computational Geosciences, 2006, 10, 161-178.	1.2	57
36	Mapping and modelling the occurrence and distribution of mountain permafrost. Norsk Geografisk Tidsskrift, 2001, 55, 186-194.	0.3	56

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37	Permafrost mapping and prospecting in southern Norway. Norsk Geografisk Tidsskrift, 1996, 50, 41-53.	0.3	55
38	Modelling alpine permafrost distribution based on energy-balance data: a first step. Permafrost and Periglacial Processes, 2002, 13, 271-282.	1.5	54
39	Modeled sensitivity of two alpine permafrost sites to RCMâ€based climate scenarios. Journal of Geophysical Research F: Earth Surface, 2013, 118, 780-794.	1.0	54
40	Mass-balance reconstruction for Glacier No. 354, Tien Shan, from 2003 to 2014. Annals of Glaciology, 2016, 57, 92-102.	2.8	54
41	Mapping and modelling of mountain permafrost distribution in the Alps. Norsk Geografisk Tidsskrift, 1996, 50, 11-15.	0.3	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.	1.5	49
43	A model of potential direct solar radiation for investigating occurrences of mountain permafrost. Permafrost and Periglacial Processes, 1992, 3, 139-142.	1.5	48
44	First results and interpretation of energy-flux measurements over Alpine permafrost. Annals of Glaciology, 2000, 31, 275-280.	2.8	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.	1.5	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.	1.5	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, .	0.8	40
51	Change detection of bare-ice albedo in the Swiss Alps. Cryosphere, 2019, 13, 397-412.	1.5	40
52	Evidence of accelerated englacial warming in the Monte Rosa area, Switzerland/Italy. Cryosphere, 2011, 5, 231-243.	1.5	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.	0.6	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.	1.5	39

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55	Vegetation on Alpine rock glacier surfaces: a contribution to abundance and dynamics on extreme plant habitats. Flora: Morphology, Distribution, Functional Ecology of Plants, 2004, 199, 505-515.	0.6	38
56	Towards remote monitoring of sub-seasonal glacier mass balance. Annals of Glaciology, 2013, 54, 75-83.	2.8	34
57	Imaging spectroscopy to assess the composition of ice surface materials and their impact on glacier mass balance. Remote Sensing of Environment, 2015, 168, 388-402.	4.6	33
58	Thirty years of permafrost research in the Corvatschâ€Furtschellas area, Eastern Swiss Alps: A review. Norsk Geografisk Tidsskrift, 2002, 56, 137-145.	0.3	31
59	Distributed snow and rock temperature modelling in steep rock walls using Alpine3D. Cryosphere, 2017, 11, 585-607.	1.5	31
60	Snow as a driving factor of rock surface temperatures in steep rough rock walls. Cold Regions Science and Technology, 2015, 118, 64-75.	1.6	30
61	Mass balance observations and reconstruction for Batysh Sook Glacier, Tien Shan, from 2004 to 2016. Cold Regions Science and Technology, 2017, 135, 76-89.	1.6	30
62	Occurrence of rocky and sedimentary glacier beds in the Swiss Alps as estimated from glacier-inventory data. Annals of Glaciology, 1999, 28, 231-235.	2.8	29
63	Re-establishing glacier monitoring in Kyrgyzstan and Uzbekistan, Central Asia. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 397-418.	0.6	29
64	A two-sided approach to estimate heat transfer processes within the active layer of the MurtÃ¨â€“Corvatsch rock glacier. Earth Surface Dynamics, 2014, 2, 141-154.	1.0	28
65	Hot Spots of Glacier Mass Balance Variability in Central Asia. Geophysical Research Letters, 2021, 48, e2020GL092084.	1.5	26
66	Snowmelt Evolution Mapping Using an Energy Balance Approach over an Alpine Terrain. Arctic, Antarctic, and Alpine Research, 2002, 34, 274-281.	0.4	25
67	Semi-automated calibration method for modelling of mountain permafrost evolution in Switzerland. Cryosphere, 2016, 10, 2693-2719.	1.5	25
68	A spatial and temporal analysis of different periglacial materials by using geoelectrical, seismic and borehole temperature data at MurtÃ¨â€“Corvatsch, Upper Engadin, Swiss Alps. Geographica Helvetica, 2013, 68, 265-280.	0.4	25
69	Cold firn in the Mont Blanc and Monte Rosa areas, European Alps: spatial distribution and statistical models. Annals of Glaciology, 2002, 35, 9-18.	2.8	24
70	Implications of climate change on Glacier de la Plaine Morte, Switzerland. Geographica Helvetica, 2013, 68, 227-237.	0.4	23
71	Permafrost distribution modelling in the mountains of the Mediterranean: Corral del Veleta, Sierra Nevada, Spain. Norsk Geografisk Tidsskrift, 2001, 55, 253-260.	0.3	22
72	The state and future of the cryosphere in Central Asia. Water Security, 2020, 11, 100072.	1.2	20

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73	Unlocking annual firn layer water equivalents from ground-penetrating radar data on an Alpine glacier. Cryosphere, 2015, 9, 1075-1087.	1.5	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. Annals of Glaciology, 1995, 21, 399-405.	2.8	19
75	Best Practice for Measuring Permafrost Temperature in Boreholes Based on the Experience in the Swiss Alps. Frontiers in Earth Science, 2021, 9, .	0.8	18
76	Permafrost research sites in the Alps: Excursions of the international workshop on permafrost and periglacial environments in mountain areas. Permafrost and Periglacial Processes, 1992, 3, 189-202.	1.5	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. Norsk Geografisk Tidsskrift, 2005, 59, 84-93.	0.3	17
78	Nearâ€surface ventilation as a key for modeling the thermal regime of coarse blocky rock glaciers. Permafrost and Periglacial Processes, 2018, 29, 152-163.	1.5	17
79	Snowmelt Evolution Mapping Using an Energy Balance Approach over an Alpine Terrain. Arctic, Antarctic, and Alpine Research, 2002, 34, 274.	0.4	17
80	Energy balance at a cold Alpine firn saddle, Seserjoch, Monte Rosa. International Journal of Climatology, 2004, 24, 1423-1442.	1.5	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. Journal of Glaciology, 2021, 67, 331-342.	1.1	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. Journal of Glaciology, 2020, 66, 35-48.	1.1	11
84	Glacier Monitoring and Capacity Building: Important Ingredients for Sustainable Mountain Development. Mountain Research and Development, 2017, 37, 141-152.	0.4	10
85	Introduction: Global Glacier Monitoringâ€”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. Frontiers in Environmental Science, 2022, 9, .	1.5	8
87	Comparison of historical and recent accumulation rates on Abramov Glacier, Pamir Alay. Journal of Glaciology, 2021, 67, 253-268.	1.1	7
88	On the potential use of glacier and permafrost observations for verification of climate models. Annals of Glaciology, 1997, 25, 400-406.	2.8	6
89	Adaptation to climate change induced water stress in major glacierized mountain regions. Climate and Development, 2022, 14, 665-677.	2.2	6
90	On the potential use of glacier and permafrost observations for verification of climate models. Annals of Glaciology, 1997, 25, 400-406.	2.8	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.	1.5	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.	3.7	5
94	Integrated glacier monitoring strategies: comments on a recent correspondence. Journal of Glaciology, 2008, 54, 947-948.	1.1	4
95	Reconstructed Centennial Mass Balance Change for Golubin Glacier, Northern Tien Shan. Atmosphere, 2022, 13, 954.	1.0	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.	0.6	3
97	Editorial: Mapping and distribution modelling of mountain permafrost. Norsk Geografisk Tidsskrift, 2001, 55, 185-185.	0.3	0
98	Influence of different digital terrain models (DTMs)on alpine permafrost modeling. Environmental Modeling and Assessment, 2007, 12, 303-313.	1.2	0
99	<i>Editorial</i> Publishing physical geography papers in <i>Geographica Helvetica</i>. Geographica Helvetica, 2013, 68, 225-226.	0.4	0
100	Introduction to the special issue of <i>Geographica Helvetica</i>: "Mapping, measuring and modeling in geomorphology". Geographica Helvetica, 2015, 70, 311-313.	0.4	0
101	Rockglaciers of the Engadine. World Geomorphological Landscapes, 2021, , 235-248.	0.1	0