

Charles Fierz

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

2,835
citations

185998

28
h-index

182168

51
g-index

77
all docs

77
docs citations

77
times ranked

1776
citing authors

#	ARTICLE	IF	CITATIONS
1	A physical SNOWPACK model for the Swiss avalanche warning. Cold Regions Science and Technology, 2002, 35, 147-167.	1.6	402
2	A physical SNOWPACK model for the Swiss avalanche warning. Cold Regions Science and Technology, 2002, 35, 169-184.	1.6	364
3	Validation of the energy budget of an alpine snowpack simulated by several snow models (Snow MIP) Tj ETQq1 1 0,784314 rgBT /Ove 2.8 212	2.8	212
4	Solving Richards Equation for snow improves snowpack meltwater runoff estimations in detailed multi-layer snowpack model. Cryosphere, 2014, 8, 257-274.	1.5	142
5	ESM-SnowMIP: assessing snow models and quantifying snow-related climate feedbacks. Geoscientific Model Development, 2018, 11, 5027-5049.	1.3	119
6	Intercomparison of snow density measurements: bias, precision, and vertical resolution. Cryosphere, 2016, 10, 371-384.	1.5	90
7	Assessment of snow transport in avalanche terrain. Cold Regions Science and Technology, 2008, 51, 240-252.	1.6	81
8	Verification of the multi-layer SNOWPACK model with different water transport schemes. Cryosphere, 2015, 9, 2271-2293.	1.5	75
9	Evaluation of modelled snow depth and snow water equivalent at three contrasting sites in Switzerland using SNOWPACK simulations driven by different meteorological data input. Cold Regions Science and Technology, 2014, 99, 27-37.	1.6	71
10	Event-driven deposition of snow on the Antarctic Plateau: analyzing field measurements with SNOWPACK. Cryosphere, 2013, 7, 333-347.	1.5	67
11	Micrometeorological and morphological observations of surface hoar dynamics on a mountain snow cover. Water Resources Research, 2010, 46, .	1.7	61
12	Simulating ice layer formation under the presence of preferential flow in layered snowpacks. Cryosphere, 2016, 10, 2731-2744.	1.5	56
13	Application of physical snowpack models in support of operational avalanche hazard forecasting: A status report on current implementations and prospects for the future. Cold Regions Science and Technology, 2020, 170, 102910.	1.6	55
14	Simulation of microwave emission from physically modeled snowpacks. Annals of Glaciology, 2000, 31, 397-405.	2.8	52
15	Superconductor/ferromagnet boundary resistances. Journal of Physics Condensed Matter, 1990, 2, 9701-9706.	0.7	51
16	Simulations of 21st century snow response to climate change in Switzerland from a set of <scp>RCMs</scp>. International Journal of Climatology, 2015, 35, 3262-3273.	1.5	51
17	Evaluating and improving the stability predictions of the snow cover model SNOWPACK. Cold Regions Science and Technology, 2006, 46, 52-59.	1.6	49
18	Forcing the snow-cover model SNOWPACK with forecasted weather data. Cryosphere, 2011, 5, 1115-1125.	1.5	48

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19	Evaluation of snow-surface energy balance models in alpine terrain. <i>Journal of Hydrology</i> , 2003, 282, 76-94.	2.3	46
20	Modeling snow instability with the snow-cover model SNOWPACK. <i>Annals of Glaciology</i> , 2004, 38, 331-338.	2.8	44
21	Assessment of the microstructure-based snow-cover model SNOWPACK: thermal and mechanical properties. <i>Cold Regions Science and Technology</i> , 2001, 33, 123-131.	1.6	40
22	An objective snow profile comparison method and its application to SNOWPACK. <i>Cold Regions Science and Technology</i> , 2001, 33, 253-261.	1.6	40
23	Assessing wet snow avalanche activity using detailed physics based snowpack simulations. <i>Geophysical Research Letters</i> , 2016, 43, 5732-5740.	1.5	39
24	Scientific and Human Errors in a Snow Model Intercomparison. <i>Bulletin of the American Meteorological Society</i> , 2021, 102, E61-E79.	1.7	38
25	Meteorological and evaluation datasets for snow modelling at 10 reference sites: description of in situ and bias-corrected reanalysis data. <i>Earth System Science Data</i> , 2019, 11, 865-880.	3.7	36
26	Snow mechanics and avalanche formation: field experiments on the dynamic response of the snow cover. <i>Surveys in Geophysics</i> , 1995, 16, 621-633.	2.1	34
27	Impact of climate change in Switzerland on socioeconomic snow indices. <i>Theoretical and Applied Climatology</i> , 2017, 127, 875-889.	1.3	34
28	Model simulations of the modulating effect of the snow cover in a rain-on-snow event. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 4657-4669.	1.9	31
29	A model for kinetic grain growth. <i>Annals of Glaciology</i> , 2001, 32, 1-6.	2.8	29
30	Transport properties of CeAl ₃ under pressure. <i>Journal of Applied Physics</i> , 1988, 63, 3899-3901.	1.1	27
31	Intercomparison of measurements of bulk snow density and water equivalent of snow cover with snow core samplers: Instrumental bias and variability induced by observers. <i>Hydrological Processes</i> , 2020, 34, 3120-3133.	1.1	27
32	Residual resistivity in cerium heavy fermion compounds. <i>Journal of Magnetism and Magnetic Materials</i> , 1988, 76-77, 285-286.	1.0	24
33	Field observation and modelling of weak-layer evolution. <i>Annals of Glaciology</i> , 1998, 26, 7-13.	2.8	21
34	Quantifying grain-shape changes in snow subjected to large temperature gradients. <i>Annals of Glaciology</i> , 2000, 31, 439-444.	2.8	21
35	The RHOSSA campaign: multi-resolution monitoring of the seasonal evolution of the structure and mechanical stability of an alpine snowpack. <i>Cryosphere</i> , 2020, 14, 1829-1848.	1.5	19
36	Low-temperature specific heat of USb and UTe. <i>Solid State Communications</i> , 1983, 47, 803-806.	0.9	18

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37	Hardness estimation and weak layer detection in simulated snow stratigraphy. Cold Regions Science and Technology, 2014, 103, 82-90.	1.6	16
38	Investigation of a wind-packing event in Queen Maud Land, Antarctica. Cryosphere, 2018, 12, 2923-2939.	1.5	16
39	Field observation and modelling of weak-layer evolution. Annals of Glaciology, 1998, 26, 7-13.	2.8	15
40	Corrigendum to "Forcing the snow-cover model SNOWPACK with forecasted weather data" published in The Cryosphere, 5, 1115-1125, 2011. Cryosphere, 2013, 7, 511-513.	1.5	15
41	An assessment of sub-snow GPS for quantification of snow water equivalent. Cryosphere, 2018, 12, 3161-3175.	1.5	15
42	Modelling the snow cover in a complex Alpine topography. Annals of Glaciology, 1997, 25, 312-316.	2.8	14
43	Transport properties of the Cu/Ni multilayer system. Journal of Physics Condensed Matter, 1994, 6, 6151-6162.	0.7	12
44	Representation of Horizontal Transport Processes in Snowmelt Modeling by Applying a Footprint Approach. Frontiers in Earth Science, 2018, 6, .	0.8	12
45	SN_GUI: a graphical user interface for snowpack modeling. Computers and Geosciences, 2004, 30, 809-816.	2.0	11
46	Wind Tunnel Experiments: Influence of Erosion and Deposition on Wind-Packing of New Snow. Frontiers in Earth Science, 2018, 6, .	0.8	11
47	Transport properties of Al/Ni and Al/Ag multilayer systems. Journal of Physics Condensed Matter, 1991, 3, 9067-9078.	0.7	10
48	Heat flow from wet to dry snowpack layers and associated faceting. Annals of Glaciology, 2004, 38, 187-194.	2.8	9
49	Modelling the snow cover in a complex Alpine topography. Annals of Glaciology, 1997, 25, 312-316.	2.8	8
50	Variations in snow surface properties at the snowpack-depth, the slope and the basin scale. Journal of Glaciology, 2008, 54, 846-856.	1.1	8
51	Assessment of techniques for analyzing snow crystals in two dimensions. Annals of Glaciology, 2008, 48, 103-112.	2.8	8
52	Wind tunnel experiments: saltation is necessary for wind-packing. Journal of Glaciology, 2017, 63, 950-958.	1.1	8
53	Deep ice layer formation in an alpine snowpack: monitoring and modeling. Cryosphere, 2020, 14, 3449-3464.	1.5	6
54	Thermopower of cerium. Journal of Magnetism and Magnetic Materials, 1985, 47-48, 517-520.	1.0	5

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55	IACS: past, present, and future of the International Association of Cryospheric Sciences. History of Geo- and Space Sciences, 2019, 10, 97-107.	0.1	5
56	Temperature Profile of Snowpack. Encyclopedia of Earth Sciences Series, 2011, , 1151-1154.	0.1	3
57	Thermoelectric power of $\hat{1}\pm$ - and $\hat{1}^2$ -cerium. Journal of Magnetism and Magnetic Materials, 1987, 63-64, 560-562.	1.0	1
58	Yu.A. Dovgaluk and T.A. Pershina, 2005. Atlas snezhinok (snezhnykh kristallov) [Atlas of snowflakes (snow crystals)] St Petersburg, Gidrometeoizdat. 139pp., paperback, RR200. (In Russian with an English) Tj ETQq0 0.0 rgBT /Overlock 10		