

# Francesca Pellicciotti

## List of Publications by Year in descending order

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Version: 2024-02-01

81  
papers

6,243  
citations

76326

40  
h-index

71685

76  
g-index

125  
all docs

125  
docs citations

125  
times ranked

4171  
citing authors

#	ARTICLE	IF	CITATIONS
1	Importance and vulnerability of the world's water towers. <i>Nature</i> , 2020, 577, 364-369.	27.8	885
2	Rising river flows throughout the twenty-first century in two Himalayan glacierized watersheds. <i>Nature Geoscience</i> , 2013, 6, 742-745.	12.9	391
3	High-resolution monitoring of Himalayan glacier dynamics using unmanned aerial vehicles. <i>Remote Sensing of Environment</i> , 2014, 150, 93-103.	11.0	382
4	An enhanced temperature-index glacier melt model including the shortwave radiation balance: development and testing for Haut Glacier d'Arolla, Switzerland. <i>Journal of Glaciology</i> , 2005, 51, 573-587.	2.2	321
5	The importance of observed gradients of air temperature and precipitation for modeling runoff from a glacierized watershed in the Nepalese Himalayas. <i>Water Resources Research</i> , 2014, 50, 2212-2226.	4.2	229
6	Contrasting climate change impact on river flows from high-altitude catchments in the Himalayan and Andes Mountains. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 9222-9227.	7.1	145
7	Unraveling the hydrology of a Himalayan catchment through integration of high resolution in situ data and remote sensing with an advanced simulation model. <i>Advances in Water Resources</i> , 2015, 78, 94-111.	3.8	142
8	Mass-balance changes of the debris-covered glaciers in the Langtang Himal, Nepal, from 1974 to 1999. <i>Journal of Glaciology</i> , 2015, 61, 373-386.	2.2	129
9	Challenges and Uncertainties in Hydrological Modeling of Remote Hindu Kush-Karakoram-Himalayan (HKH) Basins: Suggestions for Calibration Strategies. <i>Mountain Research and Development</i> , 2012, 32, 39-50.	1.0	123
10	The state of rock debris covering Earth's glaciers. <i>Nature Geoscience</i> , 2020, 13, 621-627.	12.9	118
11	Health and sustainability of glaciers in High Mountain Asia. <i>Nature Communications</i> , 2021, 12, 2868.	12.8	118
12	Object-based analysis of unmanned aerial vehicle imagery to map and characterise surface features on a debris-covered glacier. <i>Remote Sensing of Environment</i> , 2016, 186, 581-595.	11.0	117
13	A study of the energy balance and melt regime on Juncal Norte Glacier, semi-arid Andes of central Chile, using melt models of different complexity. <i>Hydrological Processes</i> , 2008, 22, 3980-3997.	2.6	112
14	Heterogeneous glacier thinning patterns over the last 40 years in Langtang Himal, Nepal. <i>Cryosphere</i> , 2016, 10, 2075-2097.	3.9	108
15	Seasonal surface velocities of a Himalayan glacier derived by automated correlation of unmanned aerial vehicle imagery. <i>Annals of Glaciology</i> , 2016, 57, 103-113.	1.4	108
16	Glaciers as a Proxy to Quantify the Spatial Distribution of Precipitation in the Hunza Basin. <i>Mountain Research and Development</i> , 2012, 32, 30-38.	1.0	102
17	The value of glacier mass balance, satellite snow cover images, and hourly discharge for improving the performance of a physically based distributed hydrological model. <i>Water Resources Research</i> , 2011, 47, .	4.2	96
18	Sources of uncertainty in modeling the glaciohydrological response of a Karakoram watershed to climate change. <i>Water Resources Research</i> , 2013, 49, 6048-6066.	4.2	95

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19	Refined energy-balance modelling of a supraglacial pond, Langtang Khola, Nepal. <i>Annals of Glaciology</i> , 2016, 57, 29-40.	1.4	95
20	Changes of glaciers in the Andes of Chile and priorities for future work. <i>Science of the Total Environment</i> , 2014, 493, 1197-1210.	8.0	94
21	Calibration of a physically based, spatially distributed hydrological model in a glacierized basin: On the use of knowledge from glaciometeorological processes to constrain model parameters. <i>Water Resources Research</i> , 2012, 48, .	4.2	93
22	A comparative high-altitude meteorological analysis from three catchments in the Nepalese Himalaya. <i>International Journal of Water Resources Development</i> , 2015, 31, 174-200.	2.0	89
23	Including debris cover effects in a distributed model of glacier ablation. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	86
24	A comparison of empirical and physically based glacier surface melt models for long-term simulations of glacier response. <i>Journal of Glaciology</i> , 2014, 60, 1140-1154.	2.2	83
25	Spatial and temporal variability of air temperature on a melting glacier: Atmospheric controls, extrapolation methods and their effect on melt modeling, Juncal Norte Glacier, Chile. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	82
26	A grid-based model of backwasting of supraglacial ice cliffs on debris-covered glaciers. <i>Annals of Glaciology</i> , 2016, 57, 199-211.	1.4	74
27	Spatial and temporal variability of meteorological variables at Haut Glacier d'Arolla (Switzerland) during the ablation season 2001: Measurements and simulations. <i>Journal of Geophysical Research</i> , 2004, 109, n/a-n/a.	3.3	72
28	Quantifying volume loss from ice cliffs on debris-covered glaciers using high-resolution terrestrial and aerial photogrammetry. <i>Journal of Glaciology</i> , 2016, 62, 684-695.	2.2	71
29	Assessing the transferability and robustness of an enhanced temperature-index glacier-melt model. <i>Journal of Glaciology</i> , 2009, 55, 258-274.	2.2	70
30	Modelling ice-cliff backwasting on a debris-covered glacier in the Nepalese Himalaya. <i>Journal of Glaciology</i> , 2015, 61, 889-907.	2.2	70
31	Effect of glaciers on streamflow trends in the Swiss Alps. <i>Water Resources Research</i> , 2010, 46, .	4.2	68
32	Comparison of climate change signals in CMIP3 and CMIP5 multi-model ensembles and implications for Central Asian glaciers. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 3661-3677.	4.9	65
33	An evaluation of approaches for modelling hydrological processes in high elevation, glacierized Andean watersheds. <i>Hydrological Processes</i> , 2014, 28, 5674-5695.	2.6	62
34	Surface Pond Energy Absorption Across Four Himalayan Glaciers Accounts for 1/8 of Total Catchment Ice Loss. <i>Geophysical Research Letters</i> , 2018, 45, 10464-10473.	4.0	61
35	Spatial, seasonal and interannual variability of supraglacial ponds in the Langtang Valley of Nepal, 1999-2013. <i>Journal of Glaciology</i> , 2017, 63, 88-105.	2.2	60
36	Transmission of solar radiation through clouds on melting glaciers: a comparison of parameterizations and their impact on melt modelling. <i>Journal of Glaciology</i> , 2011, 57, 367-381.	2.2	51

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37	A physically based 3D model of ice cliff evolution over debris-covered glaciers. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 2471-2493.	2.8	47
38	Pond Dynamics and Supraglacial-Englacial Connectivity on Debris-Covered Lirung Glacier, Nepal. <i>Frontiers in Earth Science</i> , 2017, 5, .	1.8	47
39	Suitability of a constant air temperature lapse rate over an Alpine glacier: testing the Greuell and BÄ¶hm model as an alternative. <i>Annals of Glaciology</i> , 2013, 54, 120-130.	1.4	46
40	Air temperature variability in a high-elevation Himalayan catchment. <i>Annals of Glaciology</i> , 2016, 57, 212-222.	1.4	45
41	Supraglacial ice cliffs and ponds on debris-covered glaciers: spatio-temporal distribution and characteristics. <i>Journal of Glaciology</i> , 2019, 65, 617-632.	2.2	44
42	Glacier runoff variations since 1955 in the Maipo River basin, in the semiarid Andes of central Chile. <i>Cryosphere</i> , 2020, 14, 2005-2027.	3.9	44
43	Satellite observations show no net change in the percentage of supraglacial debris-covered area in northern Pakistan from 1977 to 2014. <i>Journal of Glaciology</i> , 2015, 61, 524-536.	2.2	41
44	Variability of air temperature over a debris-covered glacier in the Nepalese Himalaya. <i>Annals of Glaciology</i> , 2016, 57, 295-307.	1.4	40
45	Modelling the hydrological response of debris-free and debris-covered glaciers to present climatic conditions in the semiarid Andes of central Chile. <i>Hydrological Processes</i> , 2016, 30, 4036-4058.	2.6	40
46	On the role of subsurface heat conduction in glacier energy-balance modelling. <i>Annals of Glaciology</i> , 2009, 50, 16-24.	1.4	37
47	An enhanced temperature index model for debris-covered glaciers accounting for thickness effect. <i>Advances in Water Resources</i> , 2016, 94, 457-469.	3.8	35
48	Interannual variability in glacier contribution to runoff from a high-elevation Andean catchment: understanding the role of debris cover in glacier hydrology. <i>Hydrological Processes</i> , 2019, 33, 214-229.	2.6	34
49	Supraglacial Ice Cliffs Can Substantially Increase the Mass Loss of Debris-Covered Glaciers. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092150.	4.0	34
50	Modeling 24-h air temperatures over mountain glaciers: Exploring the influence of katabatic cooling and external warming. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 3139-3157.	3.3	33
51	Aspect controls the survival of ice cliffs on debris-covered glaciers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 4369-4374.	7.1	33
52	A comparison of parameterizations of incoming longwave radiation over melting glaciers: Model robustness and seasonal variability. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 3066-3084.	3.3	32
53	Patterns of glacier ablation across North-Central Chile: Identifying the limits of empirical melt models under sublimation-favorable conditions. <i>Water Resources Research</i> , 2017, 53, 5601-5625.	4.2	32
54	Snow Depth Patterns in a High Mountain Andean Catchment from Satellite Optical Tristereoscopic Remote Sensing. <i>Water Resources Research</i> , 2020, 56, e2019WR024880.	4.2	32

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55	Melt and surface sublimation across a glacier in a dry environment: distributed energy-balance modelling of Juncal Norte Glacier, Chile. <i>Journal of Glaciology</i> , 2017, 63, 803-822.	2.2	31
56	Estimating runoff from a glacierized catchment using natural tracers in the semi-arid Andes cordillera. <i>Hydrological Processes</i> , 2016, 30, 3609-3626.	2.6	30
57	Mapping ice cliffs on debris-covered glaciers using multispectral satellite images. <i>Remote Sensing of Environment</i> , 2021, 253, 112201.	11.0	30
58	Glaciological Investigations Using the Synthetic Aperture Radar Imaging System. <i>Annals of Glaciology</i> , 1987, 9, 11-19.	1.4	28
59	Automated detection of ice cliffs within supraglacial debris cover. <i>Cryosphere</i> , 2018, 12, 1811-1829.	3.9	26
60	Changes in glaciers in the Swiss Alps and impact on basin hydrology: Current state of the art and future research. <i>Science of the Total Environment</i> , 2014, 493, 1152-1170.	8.0	25
61	Air temperature distribution and energy-balance modelling of a debris-covered glacier. <i>Journal of Glaciology</i> , 2016, 62, 185-198.	2.2	25
62	Seasonal Dynamics of a Temperate Tibetan Glacier Revealed by High-Resolution UAV Photogrammetry and In Situ Measurements. <i>Remote Sensing</i> , 2020, 12, 2389.	4.0	25
63	Parameter sensitivity of a distributed enhanced temperature-index melt model. <i>Annals of Glaciology</i> , 2013, 54, 311-321.	1.4	24
64	High-Resolution Snowline Delineation From Landsat Imagery to Infer Snow Cover Controls in a Himalayan Catchment. <i>Water Resources Research</i> , 2019, 55, 6754-6772.	4.2	24
65	Distributed summer air temperatures across mountain glaciers in the south-east Tibetan Plateau: temperature sensitivity and comparison with existing glacier datasets. <i>Cryosphere</i> , 2021, 15, 595-614.	3.9	18
66	Understanding monsoon controls on the energy and mass balance of glaciers in the Central and Eastern Himalaya. <i>Cryosphere</i> , 2022, 16, 1631-1652.	3.9	17
67	Modeling the Response of the Langtang Glacier and the Hintereisferner to a Changing Climate Since the Little Ice Age. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	16
68	Knowledge Priorities on Climate Change and Water in the Upper Indus Basin: A Horizon Scanning Exercise to Identify the Top 100 Research Questions in Social and Natural Sciences. <i>Earth's Future</i> , 2022, 10, .	6.3	14
69	Centreline and cross-glacier air temperature variability on an Alpine glacier: assessing temperature distribution methods and their influence on melt model calculations. <i>Journal of Glaciology</i> , 2017, 63, 973-988.	2.2	13
70	Interannual Dynamics of Ice Cliff Populations on Debris-Covered Glaciers From Remote Sensing Observations and Stochastic Modeling. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2021JF006179.	2.8	13
71	The Utility of Optical Satellite Winter Snow Depths for Initializing a Glacio-Hydrological Model of a High-Elevation, Andean Catchment. <i>Water Resources Research</i> , 2020, 56, e2020WR027188.	4.2	12
72	Controls on the relative melt rates of debris-covered glacier surfaces. <i>Environmental Research Letters</i> , 2022, 17, 064004.	5.2	12

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73	The Energy and Mass Balance of Peruvian Glaciers. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD034911.	3.3	11
74	Anisotropy Parameterization Development and Evaluation for Glacier Surface Albedo Retrieval from Satellite Observations. <i>Remote Sensing</i> , 2021, 13, 1714.	4.0	10
75	Modelling supraglacial debris-cover evolution from the single-glacier to the regional scale: an application to High Mountain Asia. <i>Cryosphere</i> , 2022, 16, 1697-1718.	3.9	10
76	Modelling spatial patterns of near-surface air temperature over a decade of melt seasons on McCall Glacier, Alaska. <i>Journal of Glaciology</i> , 2020, 66, 386-400.	2.2	9
77	Intensified paraglacial slope failures due to accelerating downwasting of a temperate glacier in Mt. Gongga, southeastern Tibetan Plateau. <i>Earth Surface Dynamics</i> , 2022, 10, 23-42.	2.4	8
78	Snow Depth Structure, Fractal Behavior, and Interannual Consistency Over Haut Glacier d'Arolla, Switzerland. <i>Water Resources Research</i> , 2018, 54, 7929-7945.	4.2	6
79	Using climate reanalysis data in conjunction with multi-temporal satellite thermal imagery to derive supraglacial debris thickness changes from energy-balance modelling. <i>Journal of Glaciology</i> , 2021, 67, 366-384.	2.2	5
80	Air temperature distribution and energy-balance modelling of a debris-covered glacier. <i>Journal of Glaciology</i> , 0, , 1-14.	2.2	4
81	Multi-Source Hydrological Data Products to Monitor High Asian River Basins and Regional Water Security. <i>Remote Sensing</i> , 2021, 13, 5122.	4.0	3