Mark A Fahnestock

List of Publications by Year
in descending order

62 papers	4,837 citations	126907 33 h-index	114465 63 g-index
64 all docs	64 docs citations	64 times ranked	3882 citing authors

#	Article	IF	Citations
1	The link between climate warming and break-up of ice shelves in the Antarctic Peninsula. Journal of Glaciology, 2000, 46, 516-530.	2.2	581
2	Large fluctuations in speed on Greenland's Jakobshavn IsbrÃ¦ glacier. Nature, 2004, 432, 608-610.	27.8	434
3	Greenland Ice Sheet Surface Properties and Ice Dynamics from ERS-1 SAR Imagery. Science, 1993, 262, 1530-1534.	12.6	241
4	Synchronous retreat and acceleration of southeast Greenland outlet glaciers 2000â€“06: ice dynamics and coupling to climate. Journal of Glaciology, 2008, 54, 646-660.	2.2	228
5	Large subglacial lakes in East Antarctica at the onset of fast-flowing ice streams. Nature, 2007, 445, 904-907.	27.8	224
6	Rapid large-area mapping of ice flow using Landsat 8. Remote Sensing of Environment, 2016, 185, 84-94.	11.0	223
7	Catastrophic ice-shelf break-up by an ice-shelf-fragment-capsize mechanism. Journal of Glaciology, 2003, 49, 22-36.	2.2	185
8	Submarine melting of the 1985 Jakobshavn Isbrae floating tongue and the triggering of the current retreat. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	183
9	Contribution of the Greenland Ice Sheet to sea level over the next millennium. Science Advances, 2019, 5, eaav9396.	10.3	164
10	Seasonal to decadal scale variations in the surface velocity of Jakobshavn Isbrae, Greenland: Observation and modelâ€based analysis. Journal of Geophysical Research, 2012, 117, .	3.3	134
11	Rapid submarine melting driven by subglacial discharge, LeConte Glacier, Alaska. Geophysical Research Letters, 2013, 40, 5153-5158.	4.0	133
12	Tropical forest backscatter anomaly evident in SeaWinds scatterometer morning overpass data during 2005 drought in Amazonia. Remote Sensing of Environment, 2011, 115, 897-907.	11.0	127
13	Radiostratigraphy and age structure of the Greenland Ice Sheet. Journal of Geophysical Research F: Earth Surface, 2015, 120, 212-241.	2.8	124
14	A synthesis of the basal thermal state of the Greenland Ice Sheet. Journal of Geophysical Research F: Earth Surface, 2016, 121, 1328-1350.	2.8	122
15	Complex Greenland outlet glacier flow captured. Nature Communications, 2016, 7, 10524.	12.8	106
16	Observations of ice-sheet motion in Greenland using satellite radar interferometry. Geophysical Research Letters, 1995, 22, 571-574.	4.0	97
17	A large impact crater beneath Hiawatha Glacier in northwest Greenland. Science Advances, 2018, 4, eaar8173.	10.3	97
18	Snow megadune fields on the East Antarctic Plateau: Extreme atmosphere-ice interaction. Geophysical Research Letters, 2000, 27, 3719-3722.	4.0	93

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19	Deep air convection in the firn at a zero-accumulation site, central Antarctica. Earth and Planetary Science Letters, 2010, 293, 359-367.	4.4	82
20	Seasonal and interannual variations in ice melange and its impact on terminus stability, Jakobshavn IsbrÃ¦, Greenland. Journal of Glaciology, 2015, 61, 76-88.	2.2	73
21	Measurement of ice-sheet topography using satellite-radar interferometry. Journal of Glaciology, 1996, 42, 10-22.	2.2	72
22	Radar attenuation and temperature within the Greenland Ice Sheet. Journal of Geophysical Research F: Earth Surface, 2015, 120, 983-1008.	2.8	72
23	West Antarctic ice-stream discharge variability: mechanism, controls and pattern of grounding-line retreat. Journal of Glaciology, 2004, 50, 471-484.	2.2	61
24	Remote sensing of snow thaw at the pan-Arctic scale using the SeaWinds scatterometer. Journal of Hydrology, 2005, 312, 294-311.	5.4	56
25	Long melt seasons on ice shelves of the Antarctic Peninsula: an analysis using satellite-based microwave emission measurements. Annals of Glaciology, 2002, 34, 127-133.	1.4	55
26	Extreme firn metamorphism: impact of decades of vapor transport on near-surface firn at a low-accumulation glazed site on the East Antarctic plateau. Annals of Glaciology, 2004, 39, 73-78.	1.4	52
27	Tectonically controlled subglacial lakes on the flanks of the Gamburtsev Subglacial Mountains, East Antarctica. Geophysical Research Letters, 2006, 33, .	4.0	52
28	The Scientific Legacy of NASAâ€™s Operation IceBridge. Reviews of Geophysics, 2021, 59, e2020RG000712.	23.0	49
29	Extracting recent short-term glacier velocity evolution over southern Alaska and the Yukon from a large collection of Landsat data. Cryosphere, 2019, 13, 795-814.	3.9	47
30	CLIMATE CHANGE: Rethinking Ice Sheet Time Scales. Science, 2007, 315, 1508-1510.	12.6	41
31	Asynchronous behavior of outlet glaciers feeding GodthÃ¥bsfjord (Nuup Kangerlua) and the triggering of Narsap Sermia's retreat in SW Greenland. Journal of Glaciology, 2017, 63, 288-308.	2.2	40
32	balance velocities of the Greenland Ice Sheet. Geophysical Research Letters, 1997, 24, 3045-3048.	4.0	39
33	Holocene deceleration of the Greenland Ice Sheet. Science, 2016, 351, 590-593.	12.6	39
34	Understanding Glacier Flow in Changing Times. Science, 2008, 322, 1061-1062.	12.6	37
35	Volume change of Jakobshavn IsbrÃ¦, West Greenland: 1985â€“1997â€“2007. Journal of Glaciology, 2010, 56, 635-646.	2.2	31
36	Observing calving-generated ocean waves with coastal broadband seismometers, Jakobshavn IsbrÃ¦, Greenland. Annals of Glaciology, 2012, 53, 79-84.	1.4	30

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37	Ice flow of Humboldt, Petermann and Ryder Gletscher, northern Greenland. Journal of Glaciology, 1999, 45, 231-241.	2.2	29
38	Dynamic jamming of icebergâ€choked fjords. Geophysical Research Letters, 2015, 42, 1122-1129.	4.0	28
39	Outlet glacier response to forcing over hourly to interannual timescales, Jakobshavn IsbrÃ¦, Greenland. Journal of Glaciology, 2012, 58, 1212-1226.	2.2	25
40	Constraining subglacial processes from surface velocity observations using surrogate-based Bayesian inference. Journal of Glaciology, 2021, 67, 385-403.	2.2	25
41	Quantifying velocity response to ocean tides and calving near the terminus of Jakobshavn IsbrÃ¦, Greenland. Journal of Glaciology, 2014, 60, 609-621.	2.2	22
42	Detection of Large-Scale Forest Canopy Change in Pan-Tropical Humid Forests 2000â€“2009 With the SeaWinds Ku-Band Scatterometer. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 2603-2617.	6.3	21
43	Spatial Patterns of Summer Speedup on South Central Alaska Glaciers. Geophysical Research Letters, 2017, 44, 9379-9388.	4.0	21
44	Improving digital elevation models over ice sheets using AVHRR-based photoclinometry. Journal of Glaciology, 1998, 44, 97-103.	2.2	20
45	Topographic Correction of Geothermal Heat Flux in Greenland and Antarctica. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF005598.	2.8	19
46	Improving AVHRR Resolution Through Data Cumulation for Mapping Polar Ice Sheets. Remote Sensing of Environment, 1999, 69, 56-66.	11.0	18
47	Ice flow in the northeast Greenland ice stream. Annals of Glaciology, 2000, 31, 141-146.	1.4	18
48	A Possible Second Large Subglacial Impact Crater in Northwest Greenland. Geophysical Research Letters, 2019, 46, 1496-1504.	4.0	18
49	Non-linear glacier response to calving events, Jakobshavn IsbrÃ¦, Greenland. Journal of Glaciology, 2019, 65, 39-54.	2.2	17
50	Rapid Reconfiguration of the Greenland Ice Sheet Coastal Margin. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2020JF005585.	2.8	17
51	The age of surface-exposed ice along the northern margin of the Greenland Ice Sheet. Journal of Glaciology, 2020, 66, 667-684.	2.2	17
52	Granular decoherence precedes ice mÃ©lange failure and glacier calving at Jakobshavn IsbrÃ¦. Nature Geoscience, 2021, 14, 417-422.	12.9	16
53	Calving icebergs indicate a thick layer of temperate ice at the base of Jakobshavn IsbrÃ¦, Greenland. Journal of Glaciology, 2009, 55, 563-566.	2.2	14
54	Evaluation of passive microwave melt detection methods on Antarctic Peninsula ice shelves using time series of Sentinel-1 SAR. Remote Sensing of Environment, 2020, 250, 112044.	11.0	13

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55	GEOPHYSICS: Glacial Flow Goes Seismic. Science, 2003, 302, 578-579.	12.6	11
56	Acquisition of a 3 min, two-dimensional glacier velocity field with terrestrial radar interferometry. Journal of Glaciology, 2017, 63, 629-636.	2.2	11
57	Detailed topography of Roosevelt Island and Siple Dome, West Antarctica. Annals of Glaciology, 1998, 27, 61-67.	1.4	9
58	Description of a program for SAR investigation of the Greenland ice sheet and an example of margin change detection using SAR. Annals of Glaciology, 1993, 17, 332-336.	1.4	7
59	Quo vadis, Alsek? Climate-driven glacier retreat may change the course of a major river outlet in southern Alaska. Geomorphology, 2021, 384, 107701.	2.6	6
60	Estimation of ice-sheet motion using satellite radar interferometry: method and error analysis with application to Humboldt Glacier, Greenland. Journal of Glaciology, 1996, 42, 564-575.	2.2	6
61	Impact of Calving Dynamics on Kangilernata Sermia, Greenland. Geophysical Research Letters, 2020, 47, e2020GL088524.	4.0	3
62	Development of enhanced ice flow at the southern margin of Ice Stream D, Antarctica. Annals of Glaciology, 1994, 20, 313-318.	1.4	1