

I M Howat

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

104
papers

8,813
citations

42
h-index

93
g-index

116
ext. papers

10,235
ext. citations

7.4
avg. IF

6.28
L-index

#	Paper	IF	Citations
104	Tidewater Glaciers. <i>Springer Textbooks in Earth Sciences, Geography and Environment</i> , 2021 , 79-91	0.5	
103	Complex Patterns of Antarctic Ice Sheet Mass Change Resolved by Time-Dependent Rate Modeling of GRACE and GRACE Follow-On Observations. <i>Geophysical Research Letters</i> , 2021 , 48,	4.9	2
102	Detection and Assessment of a Large and Potentially Tsunamigenic Periglacial Landslide in Barry Arm, Alaska. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL089800	4.9	11
101	Characterization of the 2008 Phreatomagmatic Eruption of Okmok From ArcticDEM and InSAR: Deposition, Erosion, and Deformation. <i>Journal of Geophysical Research: Solid Earth</i> , 2020 , 125, e2019JB018977	3.6	1
100	Deep glacial troughs and stabilizing ridges unveiled beneath the margins of the Antarctic ice sheet. <i>Nature Geoscience</i> , 2020 , 13, 132-137	18.3	205
99	Dynamic ice loss from the Greenland Ice Sheet driven by sustained glacier retreat. <i>Communications Earth & Environment</i> , 2020 , 1,	6.1	62
98	Basal Channel Evolution on the Getz Ice Shelf, West Antarctica. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020 , 125, e2019JF005293	3.8	1
97	Coastline extraction from repeat high resolution satellite imagery. <i>Remote Sensing of Environment</i> , 2019 , 229, 260-270	13.2	21
96	The Reference Elevation Model of Antarctica. <i>Cryosphere</i> , 2019 , 13, 665-674	5.5	199
95	Ice flow variations at Polar Record Glacier, East Antarctica. <i>Journal of Glaciology</i> , 2019 , 65, 279-287	3.4	11
94	Applications of High-Resolution, Cross-Track, Pushbroom Satellite Images With the SETSM Algorithm. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2019 , 12, 3885-3899	4.7	0
93	Heterogeneous Changes in Western North American Glaciers Linked to Decadal Variability in Zonal Wind Strength. <i>Geophysical Research Letters</i> , 2019 , 46, 200-209	4.9	42
92	Non-linear glacier response to calving events, Jakobshavn Isbr� Greenland. <i>Journal of Glaciology</i> , 2019 , 65, 39-54	3.4	12
91	Land Ice Freshwater Budget of the Arctic and North Atlantic Oceans: 1. Data, Methods, and Results. <i>Journal of Geophysical Research: Oceans</i> , 2018 , 123, 1827-1837	3.3	72
90	Estimating River Surface Elevation From ArcticDEM. <i>Geophysical Research Letters</i> , 2018 , 45, 3107-3114	4.9	16
89	Automatic relative RPC image model bias compensation through hierarchical image matching for improving DEM quality. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2018 , 136, 120-133	11.8	17
88	A Complete Map of Greenland Ice Velocity Derived from Satellite Data Collected over 20 Years. <i>Journal of Glaciology</i> , 2018 , 64, 1-11	3.4	65

87	High-Resolution Interannual Mass Anomalies of the Antarctic Ice Sheet by Combining GRACE Gravimetry and ENVISAT Altimetry. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018 , 56, 539-546	8.1	3
86	Seasonal to decadal variability in ice discharge from the Greenland Ice Sheet. <i>Cryosphere</i> , 2018 , 12, 3813-3825	5.5	53
85	Autonomous ice sheet surface mass balance measurements from cosmic rays. <i>Cryosphere</i> , 2018 , 12, 2099-2108	5.5	9
84	Greenland Ice Mapping Project: Ice Flow Velocity Variation at sub-monthly to decadal time scales. <i>Cryosphere</i> , 2018 , 12, 2211-2227	5.5	42
83	Detection of Saturation in High-Resolution Pushbroom Satellite Imagery. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2018 , 11, 1684-1693	4.7	2
82	Improved Multiple Matching Method for Observing Glacier Motion with Repeat Image Feature Tracking. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2017 , 55, 2431-2441	8.1	16
81	The Surface Extraction from TIN based Search-space Minimization (SETSM) algorithm. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2017 , 129, 55-76	11.8	39
80	Comparison of Methods to Estimate Snow Water Equivalent at the Mountain Range Scale: A Case Study of the California Sierra Nevada. <i>Journal of Hydrometeorology</i> , 2017 , 18, 1101-1119	3.7	36
79	A tipping point in refreezing accelerates mass loss of Greenland's glaciers and ice caps. <i>Nature Communications</i> , 2017 , 8, 14730	17.4	49
78	Acquisition of a 3 min, two-dimensional glacier velocity field with terrestrial radar interferometry. <i>Journal of Glaciology</i> , 2017 , 63, 629-636	3.4	10
77	Winter mass balance of Drangajökull ice cap (NW Iceland) derived from satellite sub-meter stereo images. <i>Cryosphere</i> , 2017 , 11, 1501-1517	5.5	21
76	An ice sheet model validation framework for the Greenland ice sheet. <i>Geoscientific Model Development</i> , 2017 , 10, 255-270	6.3	14
75	BedMachine v3: Complete Bed Topography and Ocean Bathymetry Mapping of Greenland From Multibeam Echo Sounding Combined With Mass Conservation. <i>Geophysical Research Letters</i> , 2017 , 44, 11051-11061	4.9	343
74	Measuring Lava Flows With ArcticDEM: Application to the 2012-2013 Eruption of Tolbachik, Kamchatka. <i>Geophysical Research Letters</i> , 2017 , 44, 12,133	4.9	16
73	Asynchronous behavior of outlet glaciers feeding Godthåbsfjord (Nuup Kangerlua) and the triggering of Narsap Sermia's retreat in SW Greenland. <i>Journal of Glaciology</i> , 2017 , 63, 288-308	3.4	32
72	Formation and development of supraglacial lakes in the percolation zone of the Greenland ice sheet. <i>Journal of Glaciology</i> , 2017 , 63, 847-853	3.4	2
71	Accelerated ice shelf rifting and retreat at Pine Island Glacier, West Antarctica. <i>Geophysical Research Letters</i> , 2016 , 43, 11,720	4.9	35
70	On the recent contribution of the Greenland ice sheet to sea level change. <i>Cryosphere</i> , 2016 , 10, 1933-1946	5.5	283

69	Annually, 1 km resolution data set of downscaled Greenland ice sheet surface mass balance (1958-2015). <i>Cryosphere</i> , 2016 , 10, 2361-2377	5.5	102
68	A SAR Record of Early 21 Century Change in Greenland. <i>Journal of Glaciology</i> , 2016 , 62, 62-71	3.4	22
67	Automated stereo-photogrammetric DEM generation at high latitudes: Surface Extraction with TIN-based Search-space Minimization (SETSM) validation and demonstration over glaciated regions. <i>GIScience and Remote Sensing</i> , 2015 , 52, 198-217	4.8	150
66	High resolution Greenland ice sheet inter-annual mass variations combining GRACE gravimetry and Envisat altimetry. <i>Earth and Planetary Science Letters</i> , 2015 , 422, 11-17	5.3	13
65	Performance of Landsat 8 Operational Land Imager for Mapping Ice Sheet Velocity. <i>Remote Sensing of Environment</i> , 2015 , 170, 90-101	13.2	20
64	Supraglacial lakes on the Greenland ice sheet advance inland under warming climate. <i>Nature Climate Change</i> , 2015 , 5, 51-55	21.4	73
63	Multi-year observations of Breiðmerkurjökull, a marine-terminating glacier in southeastern Iceland, using terrestrial radar interferometry. <i>Journal of Glaciology</i> , 2015 , 61, 42-54	3.4	26
62	Elevation change of the Greenland Ice Sheet due to surface mass balance and firn processes, 1960-2014. <i>Cryosphere</i> , 2015 , 9, 2009-2025	5.5	49
61	Observations of inertial currents in a lagoon in southeastern Iceland using terrestrial radar interferometry and automated iceberg tracking. <i>Computers and Geosciences</i> , 2015 , 82, 23-30	4.5	12
60	Brief Communication: Sudden drainage of a subglacial lake beneath the Greenland Ice Sheet. <i>Cryosphere</i> , 2015 , 9, 103-108	5.5	20
59	Changes in the firn structure of the western Greenland Ice Sheet caused by recent warming. <i>Cryosphere</i> , 2015 , 9, 1203-1211	5.5	36
58	Automated Coregistration of Repeat Digital Elevation Models for Surface Elevation Change Measurement Using Geometric Constraints. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2014 , 52, 2247-2260	8.1	19
57	An improved mass budget for the Greenland ice sheet. <i>Geophysical Research Letters</i> , 2014 , 41, 866-872	4.9	416
56	The Randolph Glacier Inventory: a globally complete inventory of glaciers. <i>Journal of Glaciology</i> , 2014 , 60, 537-552	3.4	669
55	The Greenland Ice Mapping Project (GIMP) land classification and surface elevation data sets. <i>Cryosphere</i> , 2014 , 8, 1509-1518	5.5	317
54	The sensitivity of flowline models of tidewater glaciers to parameter uncertainty. <i>Cryosphere</i> , 2013 , 7, 1579-1590	5.5	12
53	<i>Brief Communication</i> <i>“Expansion of meltwater lakes on the Greenland Ice Sheet”</i>. <i>Cryosphere</i> , 2013 , 7, 201-204	5.5	57
52	High sensitivity of tidewater outlet glacier dynamics to shape. <i>Cryosphere</i> , 2013 , 7, 1007-1015	5.5	69

51	A new bed elevation dataset for Greenland. <i>Cryosphere</i> , 2013 , 7, 499-510	5.5	291
50	Annually resolved ice core records of tropical climate variability over the past ~1800 years. <i>Science</i> , 2013 , 340, 945-50	33.3	166
49	Submarine melt rate estimates for floating termini of Greenland outlet glaciers (2000-2010). <i>Journal of Glaciology</i> , 2013 , 59, 67-75	3.4	61
48	Improving maps of ice-sheet surface elevation change using combined laser altimeter and stereoscopic elevation model data. <i>Journal of Glaciology</i> , 2013 , 59, 524-532	3.4	9
47	Oceanic mechanical forcing of a marine-terminating Greenland glacier. <i>Annals of Glaciology</i> , 2012 , 53, 181-192	2.5	60
46	Constraining ice mass loss from Jakobshavn Isbr� (Greenland) using InSAR-measured crustal uplift. <i>Geophysical Journal International</i> , 2012 , 188, 994-1006	2.6	9
45	21st-century evolution of Greenland outlet glacier velocities. <i>Science</i> , 2012 , 336, 576-8	33.3	267
44	Continuously accelerating ice loss over Amundsen Sea catchment, West Antarctica, revealed by integrating altimetry and GRACE data. <i>Earth and Planetary Science Letters</i> , 2012 , 321-322, 74-80	5.3	25
43	Seasonal to decadal scale variations in the surface velocity of Jakobshavn Isbrae, Greenland: Observation and model-based analysis. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		114
42	Rift in Antarctic Glacier: A Unique Chance to Study Ice Shelf Retreat. <i>Eos</i> , 2012 , 93, 77-78	1.5	9
41	Emerging technology monitors ice-sea interface at outlet glaciers. <i>Eos</i> , 2012 , 93, 497-498	1.5	12
40	Changes in the marine-terminating glaciers of central east Greenland, 2000-2010. <i>Cryosphere</i> , 2012 , 6, 211-220	5.5	47
39	Monitoring a glacier in southeastern Iceland with the portable Terrestrial Radar Interferometer 2012 ,		6
38	Submarine melting of the 1985 Jakobshavn Isbr� floating tongue and the triggering of the current retreat. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		154
37	Changes in the dynamics of marine terminating outlet glaciers in west Greenland (2000-2009). <i>Journal of Geophysical Research</i> , 2011 , 116,		72
36	Mass balance of Greenland's three largest outlet glaciers, 2000-2010. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	100
35	Multi-decadal retreat of Greenland's marine-terminating glaciers. <i>Journal of Glaciology</i> , 2011 , 57, 389-396	3.4	124
34	Efficient Automated Glacier Surface Velocity Measurement From Repeat Images Using Multi-Image/Multichip and Null Exclusion Feature Tracking. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2011 , 49, 2838-2846	8.1	45

33	Committed sea-level rise for the next century from Greenland ice sheet dynamics during the past decade. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 8978-83	11.5	168
32	Geophysical evidence for Holocene lake-level change in southern California (Dry Lake). <i>Boreas</i> , 2010 , 39, 131-144	2.4	16
31	Journal club. A glaciologist ponders iceberg calving from a safe distance. <i>Nature</i> , 2010 , 466, 799	50.4	
30	Freshwater flux to Sermilik Fjord, SE Greenland. <i>Cryosphere</i> , 2010 , 4, 453-465	5.5	31
29	Greenland flow variability from ice-sheet-wide velocity mapping. <i>Journal of Glaciology</i> , 2010 , 56, 415-430	3.4	451
28	GPS measurements of crustal uplift near Jakobshavn Isbræ due to glacial ice mass loss. <i>Journal of Geophysical Research</i> , 2010 , 115,		40
27	Seasonal variability in the dynamics of marine-terminating outlet glaciers in Greenland. <i>Journal of Glaciology</i> , 2010 , 56, 601-613	3.4	162
26	Large-scale changes in Greenland outlet glacier dynamics triggered at the terminus. <i>Nature Geoscience</i> , 2009 , 2, 110-114	18.3	370
25	Terminus dynamics at an advancing glacier: Taku Glacier, Alaska. <i>Journal of Glaciology</i> , 2009 , 55, 1052-1060	9.4	19
24	Ice-front variation and tidewater behavior on Helheim and Kangerdlugssuaq Glaciers, Greenland. <i>Journal of Geophysical Research</i> , 2008 , 113,		132
23	Dynamic controls on glacier basal motion inferred from surface ice motion. <i>Journal of Geophysical Research</i> , 2008 , 113,		37
22	Rates of southeast Greenland ice volume loss from combined ICESat and ASTER observations. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	117
21	Continued evolution of Jakobshavn Isbrae following its rapid speedup. <i>Journal of Geophysical Research</i> , 2008 , 113,		175
20	Seasonal speedup along the western flank of the Greenland Ice Sheet. <i>Science</i> , 2008 , 320, 781-3	33.3	332
19	Fracture propagation to the base of the Greenland Ice Sheet during supraglacial lake drainage. <i>Science</i> , 2008 , 320, 778-81	33.3	408
18	Synchronous retreat and acceleration of southeast Greenland outlet glaciers 2000-2006: ice dynamics and coupling to climate. <i>Journal of Glaciology</i> , 2008 , 54, 646-660	3.4	183
17	Rapid changes in ice discharge from Greenland outlet glaciers. <i>Science</i> , 2007 , 315, 1559-61	33.3	373
16	A precipitation-dominated, mid-latitude glacier system: Mount Shasta, California. <i>Climate Dynamics</i> , 2006 , 28, 85-98	4.2	13

15	Rapid retreat and acceleration of Helheim Glacier, east Greenland. <i>Geophysical Research Letters</i> , 2005 , 32, n/a-n/a	4.9	219
14	Climate sensitivity of spring snowpack in the Sierra Nevada. <i>Journal of Geophysical Research</i> , 2005 , 110, n/a-n/a		41
13	Trends in spring snowpack over a half-century of climate warming in California, USA. <i>Annals of Glaciology</i> , 2005 , 40, 151-156	2.5	30
12	Reconstructions of western Ross Sea palaeo-ice-stream grounding zones from high-resolution acoustic stratigraphy. <i>Boreas</i> , 2003 , 32, 56-75	2.4	41
11	Reconstructions of western Ross Sea palaeo-ice-stream grounding zones from high-resolution acoustic stratigraphy 2003 , 32, 56		8
10	A daily, 1-km resolution dataset of downscaled Greenland ice sheet surface mass balance (1958-2015)		2
9	Freshwater flux to Sermilik Fjord, SE Greenland		1
8	<i></i>Brief Communication</i> "Expansion of meltwater lakes on the Greenland ice sheet"		2
7	A new bed elevation dataset for Greenland		5
6	High sensitivity of tidewater outlet glacier dynamics to shape		3
5	The Greenland Ice Mapping Project (GIMP) land classification and surface elevation datasets		28
4	Elevation change of the Greenland ice sheet due to surface mass balance and firn processes, 1960-2013		5
3	Changes in the firn structure of the Greenland Ice Sheet caused by recent warming		1
2	Greenland ice-sheet wide glacier classification based on two distinct seasonal ice velocity behaviors. <i>Journal of Glaciology</i> , 1-8	3-4	2
1	Temporal variability in snow accumulation and density at Summit Camp, Greenland ice sheet. <i>Journal of Glaciology</i> , 1-9	3-4	