Slawek M Tulaczyk

List of Publications by Year
in descending order

130 papers	8,619 citations	41258 49 h-index	51492 86 g-index
143 all docs	143 docs citations	143 times ranked	5438 citing authors

#	Article	IF	Citations
1	Rapid basal melting of the Greenland Ice Sheet from surface meltwater drainage. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	10
2	Comparison of ground-based and airborne transient electromagnetic methods for mapping glacial and permafrost environments: Cases from McMurdo Dry Valleys, Antarctica. Cold Regions Science and Technology, 2022, 199, 103578.	1.6	4
3	Migratory earthquake precursors are dominant on an ice stream fault. Science Advances, 2021, 7, .	4.7	6
4	Breaking All the Rules: The First Recorded Hard Substrate Sessile Benthic Community Far Beneath an Antarctic Ice Shelf. Frontiers in Marine Science, 2021, 8, .	1.2	21
5	Induced polarization effects in airborne transient electromagnetic data collected in the McMurdo Dry Valleys, Antarctica. Geophysical Journal International, 2021, 226, 1574-1583.	1.0	6
6	Inferring Ice Fabric From Birefringence Loss in Airborne Radargrams: Application to the Eastern Shear Margin of Thwaites Glacier, West Antarctica. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF006023.	1.0	19
7	Strong MARSIS Radar Reflections From the Base of Martian South Polar Cap May Be Due to Conductive Ice or Minerals. Geophysical Research Letters, 2021, 48, e2021GL093880.	1.5	28
8	Thermal legacy of a large paleolake in Taylor Valley, East Antarctica, as evidenced by an airborne electromagnetic survey. Cryosphere, 2021, 15, 3577-3593.	1.5	4
9	Rapid and accurate polarimetric radar measurements of ice crystal fabric orientation at the Western Antarctic Ice Sheet (WAIS) Divide ice core site. Cryosphere, 2021, 15, 4117-4133.	1.5	8
10	Did Holocene climate changes drive West Antarctic grounding line retreat and readvance?. Cryosphere, 2021, 15, 4655-4673.	1.5	15
11	A significant acceleration of ice volume discharge preceded a major retreat of a West Antarctic paleoâ€“ice stream. Geology, 2020, 48, 313-317.	2.0	12
12	Icequake streaks linked to potential mega-scale glacial lineations beneath an Antarctic ice stream. Geology, 2020, 48, 99-102.	2.0	12
13	Ice retreat in Wilkes Basin of East Antarctica during a warm interglacial. Nature, 2020, 583, 554-559.	13.7	36
14	Tidal Pressurization of the Ocean Cavity Near an Antarctic Ice Shelf Grounding Line. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015562.	1.0	12
15	The role of electrical conductivity in radar wave reflection from glacier beds. Cryosphere, 2020, 14, 4495-4506.	1.5	18
16	Spatiotemporal distributions of icebergs in a temperate fjord: Columbia Fjord, Alaska. Cryosphere, 2019, 13, 1785-1799.	1.5	6
17	Evidence for Pathways of Concentrated Submarine Groundwater Discharge in East Antarctica from Helicopter-Borne Electrical Resistivity Measurements. Hydrology, 2019, 6, 54.	1.3	17
18	Microbial diversity of an Antarctic subglacial community and highâ€resolution replicate sampling inform hydrological connectivity in a polar desert. Environmental Microbiology, 2019, 21, 2290-2306.	1.8	20

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19	The Geochemistry of Englacial Brine From Taylor Glacier, Antarctica. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 633-648.	1.3	31
20	Implications of basal micro-earthquakes and tremor for ice stream mechanics: Stick-slip basal sliding and till erosion. Earth and Planetary Science Letters, 2018, 486, 54-60.	1.8	20
21	Microbial processes in the weathering crust aquifer of a temperate glacier. Cryosphere, 2018, 12, 3653-3669.	1.5	17
22	Ocean Stratification and Low Melt Rates at the Ross Ice Shelf Grounding Zone. Journal of Geophysical Research: Oceans, 2018, 123, 7438-7452.	1.0	61
23	Trans-dimensional Bayesian inversion of airborne transient EM data from Taylor Glacier, Antarctica. Geophysical Journal International, 2018, 214, 1919-1936.	1.0	43
24	Extensive retreat and re-advance of the West Antarctic Ice Sheet during the Holocene. Nature, 2018, 558, 430-434.	13.7	113
25	The paradox of a long grounding during West Antarctic Ice Sheet retreat in Ross Sea. Scientific Reports, 2017, 7, 1262.	1.6	33
26	An englacial hydrologic system of brine within a cold glacier: Blood Falls, McMurdo Dry Valleys, Antarctica. Journal of Glaciology, 2017, 63, 387-400.	1.1	33
27	Spatially Variable Geothermal Heat Flux in West Antarctica: Evidence and Implications. Geophysical Research Letters, 2017, 44, 9823-9832.	1.5	27
28	Snow accumulation variability on a West Antarctic ice stream observed with GPS reflectometry, 2007â€“2017. Geophysical Research Letters, 2017, 44, 7808-7816.	1.5	23
29	Roughness of a subglacial conduit under Hansbreen, Svalbard. Journal of Glaciology, 2017, 63, 423-435.	1.1	12
30	The past, present, and future viscous heat dissipation available for Greenland subglacial conduit formation. Cryosphere, 2017, 11, 303-317.	1.5	17
31	Microbial Community Structure of Subglacial Lake Whillans, West Antarctica. Frontiers in Microbiology, 2016, 7, 1457.	1.5	74
32	Methane transport through submarine groundwater discharge to the <scp>N</scp>orth <scp>P</scp>acific and <scp>A</scp>rctic Ocean at two <scp>A</scp>laskan sites. Limnology and Oceanography, 2016, 61, S344.	1.6	43
33	Ice flow dynamics forced by water pressure variations in subglacial granular beds. Geophysical Research Letters, 2016, 43, 12,165.	1.5	50
34	Physical processes in Subglacial Lake Whillans, West Antarctica: Inferences from sediment cores. Earth and Planetary Science Letters, 2016, 444, 56-63.	1.8	37
35	Episodic ice velocity fluctuations triggered by a subglacial flood in West Antarctica. Geophysical Research Letters, 2016, 43, 2640-2648.	1.5	78
36	Helicopter-borne transient electromagnetics in high-latitude environments: An application in the McMurdo Dry Valleys, Antarctica. Geophysics, 2016, 81, WA87-WA99.	1.4	34

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37	Technologies for retrieving sediment cores in Antarctic subglacial settings. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150056.	1.6	24
38	Subglacial Lake Whillans microbial biogeochemistry: a synthesis of current knowledge. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20140290.	1.6	64
39	Navigation technology for exploration of glacier ice with maneuverable melting probes. Cold Regions Science and Technology, 2016, 123, 53-70.	1.6	46
40	Reactivation of Kamb Ice Stream tributaries triggers centuryâ€scale reorganization of Siple Coast ice flow in West Antarctica. Geophysical Research Letters, 2015, 42, 8471-8480.	1.5	24
41	A new methodology to simulate subglacial deformation of water-saturated granular material. Cryosphere, 2015, 9, 2183-2200.	1.5	21
42	Subsurface imaging reveals a confined aquifer beneath an ice-sealed Antarctic lake. Geophysical Research Letters, 2015, 42, 96-103.	1.5	31
43	Rupture speed dependence on initial stress profiles: Insights from glacier and laboratory stick-slip. Earth and Planetary Science Letters, 2015, 411, 112-120.	1.8	34
44	High geothermal heat flux measured below the West Antarctic Ice Sheet. Science Advances, 2015, 1, e1500093.	4.7	126
45	Methane transport from the active layer to lakes in the Arctic using Toolik Lake, Alaska, as a case study. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3636-3640.	3.3	55
46	Deep groundwater and potential subsurface habitats beneath an Antarctic dry valley. Nature Communications, 2015, 6, 6831.	5.8	130
47	Current Magnitude and Mechanisms of Groundwater Discharge in the Arctic: Case Study from Alaska. Environmental Science & Technology, 2015, 49, 12036-12043.	4.6	34
48	A decade of West Antarctic subglacial lake interactions from combined ICESat and CryoSatâ€2 altimetry. Geophysical Research Letters, 2014, 41, 891-898.	1.5	77
49	IceMole: a maneuverable probe for clean in situ analysis and sampling of subsurface ice and subglacial aquatic ecosystems. Annals of Glaciology, 2014, 55, 14-22.	2.8	51
50	Significant groundwater contribution to Antarctic ice streams hydrologic budget. Geophysical Research Letters, 2014, 41, 2003-2010.	1.5	87
51	A microbial ecosystem beneath the West Antarctic ice sheet. Nature, 2014, 512, 310-313.	13.7	255
52	Variable deceleration of Whillans Ice Stream, West Antarctica. Journal of Geophysical Research F: Earth Surface, 2014, 119, 212-224.	1.0	40
53	WISSARD at Subglacial Lake Whillans, West Antarctica: scientific operations and initial observations. Annals of Glaciology, 2014, 55, 51-58.	2.8	121
54	Formation of mega-scale glacial lineations on the Dubawnt Lake Ice Stream bed: 2. Sedimentology and stratigraphy. Quaternary Science Reviews, 2013, 77, 210-227.	1.4	42

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55	The potential role of the Antarctic Ice Sheet in global biogeochemical cycles. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2013, 104, 55-67.	0.3	65
56	Ice-sheet mass balance and climate change. Nature, 2013, 498, 51-59.	13.7	253
57	Discrete element modeling of subglacial sediment deformation. Journal of Geophysical Research F: Earth Surface, 2013, 118, 2230-2242.	1.0	31
58	A microbiologically clean strategy for access to the Whillans Ice Stream subglacial environment. Antarctic Science, 2013, 25, 637-647.	0.5	74
59	The role of Pine Island Glacier ice shelf basal channels in deep-water upwelling, polynyas and ocean circulation in Pine Island Bay, Antarctica. Annals of Glaciology, 2012, 53, 123-128.	2.8	58
60	Oceanic mechanical forcing of a marine-terminating Greenland glacier. Annals of Glaciology, 2012, 53, 181-192.	2.8	69
61	Potential methane reservoirs beneath Antarctica. Nature, 2012, 488, 633-637.	13.7	184
62	First Airborne Transient EM Survey in Antarctica: Mapping of Saline Ground Water System. , 2012, , .		2
63	Transient slip events from near-field seismic and geodetic data on a glacier fault, Whillans Ice Plain, West Antarctica. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	48
64	Analysis of the microbial community and geochemistry of a sediment core from Great Slave Lake, Canada. Antonie Van Leeuwenhoek, 2011, 99, 423-430.	0.7	13
65	Antarctica's Deep Frozen â€œLakesâ€• Science, 2011, 331, 1524-1525.	6.0	8
66	Siple Coast subglacial aquatic environments: The Whillans Ice Stream Subglacial Access Research Drilling Project. Geophysical Monograph Series, 2011, , 199-219.	0.1	24
67	Subglacial lake sediments and sedimentary processes: Potential archives of ice sheet evolution, past environmental change, and the presence of life. Geophysical Monograph Series, 2011, , 83-110.	0.1	14
68	Hydrochemistry of ice stream bedsâ€”evaporitic or microbial effects?. Hydrological Processes, 2010, 24, 517-523.	1.1	19
69	Geophysical evidence for Holocene lakeâ€level change in southern California (Dry Lake). Boreas, 2010, 39, 131-144.	1.2	23
70	Basal ice sequences in Antarctic ice stream: Exposure of past hydrologic conditions and a principal mode of sediment transfer. Journal of Geophysical Research, 2010, 115, .	3.3	51
71	Probing Subglacial Environments Under the Whillans Ice Stream. Eos, 2010, 91, 253-254.	0.1	11
72	An inventory of active subglacial lakes in Antarctica detected by ICESat (2003â€“2008). Journal of Glaciology, 2009, 55, 573-595.	1.1	291

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73	Basal conditions for Pine Island and Thwaites Glaciers, West Antarctica, determined using satellite and airborne data. Journal of Glaciology, 2009, 55, 245-257.	1.1	181
74	Bacteria beneath the West Antarctic Ice Sheet. Environmental Microbiology, 2009, 11, 609-615.	1.8	135
75	Schwertmannite in wet, acid, and oxic microenvironments beneath polar and polythermal glaciers. Geology, 2009, 37, 431-434.	2.0	46
76	Bioavailable iron in the Southern Ocean: the significance of the iceberg conveyor belt. Geochemical Transactions, 2008, 9, 7.	1.8	194
77	Superimposition of ribbed moraines on a palaeoâ€iceâ€stream bed: implications for ice stream dynamics and shutdown. Earth Surface Processes and Landforms, 2008, 33, 593-609.	1.2	83
78	Subglacial methanogenesis: A potential climatic amplifier?. Global Biogeochemical Cycles, 2008, 22, n/a-n/a.	1.9	81
79	Dynamic controls on glacier basal motion inferred from surface ice motion. Journal of Geophysical Research, 2008, 113, .	3.3	40
80	Large subglacial lake beneath the Laurentide Ice Sheet inferred from sedimentary sequences. Geology, 2008, 36, 563.	2.0	40
81	Antarctic subglacial water: origin, evolution, and ecology. , 2008, , 119-136.		87
82	Sensitivity of ocean circulation and sea-ice conditions to loss of West Antarctic ice shelves and ice sheet. Journal of Glaciology, 2007, 53, 490-498.	1.1	4
83	Reply to comment by A. W. Rempel et al. on â€œA quantitative framework for interpretation of basal ice facies formed by ice accretion over subglacial sedimentâ€• Journal of Geophysical Research, 2007, 112, .	3.3	3
84	Ice stream sticky spots: A review of their identification and influence beneath contemporary and palaeo-ice streams. Earth-Science Reviews, 2007, 81, 217-249.	4.0	127
85	A quantitative framework for interpretation of basal ice facies formed by ice accretion over subglacial sediment. Journal of Geophysical Research, 2006, 111, .	3.3	32
86	Geologic constraints on the existence and distribution of West Antarctic subglacial volcanism. Geophysical Research Letters, 2006, 33, .	1.5	13
87	Ice-dynamical constraints on the existence and impact of subglacial volcanism on West Antarctic ice sheet stability. Geophysical Research Letters, 2006, 33, .	1.5	18
88	Integrating satellite observations with modelling: basal shear stress of the Filcher-Ronne ice streams, Antarctica. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 1795-1814.	1.6	66
89	A precipitation-dominated, mid-latitude glacier system: Mount Shasta, California. Climate Dynamics, 2006, 28, 85-98.	1.7	14
90	Scale independence of till rheology. Journal of Glaciology, 2006, 52, 377-380.	1.1	40

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91	Geomorphological Map of Ribbed Moraines on the Dubawnt Lake Palaeo-Ice Stream Bed: A Signature of Ice Stream Shut-down?. Journal of Maps, 2006, 2, 1-9.	1.0	19
92	Trends in spring snowpack over a half-century of climate warming in California, USA. Annals of Glaciology, 2005, 40, 151-156.	2.8	32
93	Roger LeB. Hooke. 2005. Principles of glacier mechanics. Second edition. Cambridge, etc., Cambridge University Press, 429pp. ISBN 0-521-83609-3, hardback, Â£75/US$120;ISBN 0-521-54416-5, paperback, Â£35/US$65.. Journal of Glaciology, 2005, 51, 336-336.	1.1	0
94	Evidence for subglacial water transport in the West Antarctic Ice Sheet through three-dimensional satellite radar interferometry. Geophysical Research Letters, 2005, 32, .	1.5	198
95	Subglacial conditions during and after stoppage of an Antarctic Ice Stream: Is reactivation imminent?. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	77
96	Rapid retreat and acceleration of Helheim Glacier, east Greenland. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	246
97	Climate sensitivity of spring snowpack in the Sierra Nevada. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	47
98	Melting and freezing beneath the Ross ice streams, Antarctica. Journal of Glaciology, 2004, 50, 96-108.	1.1	89
99	Late Quaternary glaciation of the Upper SoÄa River Region (Southern Julian Alps, NW Slovenia). Sedimentary Geology, 2004, 165, 265-283.	1.0	49
100	Basal shear stress of the Ross ice streams from control method inversions. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	173
101	Signature of palaeoâ€iceâ€stream stagnation: till consolidation induced by basal freezeâ€on. Boreas, 2003, 32, 114-129.	1.2	52
102	Glacial erosion beneath ice streams and iceâ€stream tributaries: constraints on temporal and spatial distribution of erosion from numerical simulations of a West Antarctic ice stream. Boreas, 2003, 32, 178-190.	1.2	27
103	Response of subglacial sediments to basal freeze-on 2. Application in numerical modeling of the recent stoppage of Ice Stream C, West Antarctica. Journal of Geophysical Research, 2003, 108, .	3.3	65
104	Workshop advances interdisciplinary polar science and fast ice sheet drilling. Eos, 2003, 84, 111.	0.1	1
105	A groove-ploughing theory for the production of mega-scale glacial lineations, and implications for ice-stream mechanics. Journal of Glaciology, 2003, 49, 240-256.	1.1	148
106	Response of subglacial sediments to basal freeze-on 1. Theory and comparison to observations from beneath the West Antarctic Ice Sheet. Journal of Geophysical Research, 2003, 108, .	3.3	95
107	Thermodynamics of basal freeze-on: predicting basal and subglacial signatures of stopped ice streams and interstream ridges. Annals of Glaciology, 2003, 36, 233-243.	2.8	55
108	Numerical investigations of the slow-down of Whillans Ice Stream, West Antarctica: is it shutting down like Ice Stream C?. Annals of Glaciology, 2003, 37, 239-246.	2.8	42

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109	Distribution of basal melting and freezing beneath tributaries of Ice Stream C: implication for the Holocene decay of the West Antarctic ice sheet. Annals of Glaciology, 2003, 36, 273-282.	2.8	33
110	Basal melt beneath Whillans Ice Stream and Ice Streams A and C, West Antarctica. Annals of Glaciology, 2003, 36, 257-262.	2.8	49
111	Signature of palaeo-ice-stream stagnation: till consolidation induced by basal freeze-on. Boreas, 2003, 32, 114-129.	1.2	12
112	Glacial erosion beneath ice streams and ice-stream tributaries: constraints on temporal and spatial distribution of erosion from numerical simulations of a West Antarctic ice stream. Boreas, 2003, 32, 178-190.	1.2	4
113	Positive Mass Balance of the Ross Ice Streams, West Antarctica. Science, 2002, 295, 476-480.	6.0	177
114	Changes in west Antarctic ice stream velocities: Observation and analysis. Journal of Geophysical Research, 2002, 107, EPM 3-1-EPM 3-22.	3.3	169
115	Reply to the comments by G.S. Boulton, K.E. Dobbie, S. Zatsepin on: Deforming soft beds under ice sheets: how extensive were they?. Quaternary International, 2002, 97-98, 173-177.	0.7	22
116	A ploughing model for the origin of weak tills beneath ice streams: a qualitative treatment. Quaternary International, 2001, 86, 59-70.	0.7	159
117	Were deforming subglacial beds beneath past ice sheets really widespread?. Quaternary International, 2001, 86, 139-150.	0.7	154
118	Microstructural interpretations of modern and Pleistocene subglacially deformed sediments: the relative role of parent material and subglacial processes. Journal of Quaternary Science, 2001, 16, 507-517.	1.1	39
119	Estimates of effective stress beneath a modern West Antarctic ice stream from till preconsolidation and void ratio. Boreas, 2001, 30, 101-114.	1.2	99
120	Estimates of effective stress beneath a modern West Antarctic ice stream from till preconsolidation and void ratio. Boreas, 2001, 30, 101-114.	1.2	12
121	Basal mechanics of Ice Stream B, west Antarctica: 2. Undrained plastic bed model. Journal of Geophysical Research, 2000, 105, 483-494.	3.3	282
122	Basal mechanics of Ice Stream B, west Antarctica: 1. Till mechanics. Journal of Geophysical Research, 2000, 105, 463-481.	3.3	408
123	Subglacial drilling at Black Rapids Glacier, Alaska, U.S.A.: drilling method and sample descriptions. Journal of Glaciology, 1999, 45, 495-505.	1.1	50
124	Ice sliding over weak, fine-grained tills: Dependence of ice-till interactions on till granulometry. , 1999, , .		60
125	Subglacial conditions under the last ice sheet in northwest Germany: ice-bed separation and enhanced basal sliding?. Quaternary Science Reviews, 1999, 18, 737-751.	1.4	139
126	Subglacial drilling at Black Rapids Glacier, Alaska, U.S.A.: drilling method and sample descriptions. Journal of Glaciology, 1999, 45, 495-505.	1.1	10

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127	Pleistocene Collapse of the West Antarctic Ice Sheet. , 1998, 281, 82-85.		247
128	Sedimentary processes at the base of a West Antarctic ice stream; constraints from textural and compositional properties of subglacial debris. Journal of Sedimentary Research, 1998, 68, 487-496.	0.8	220
129	A Mini-Surge on the Ryder Glacier, Greenland, Observed by Satellite Radar Interferometry. Science, 1996, 274, 228-230.	6.0	146
130	Fast Glacier Flow and Ice Streaming. , 0, , 353-359.		2