

# Gwenn E Flowers

## List of Publications by Year in descending order

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Version: 2024-02-01

64  
papers

2,543  
citations

172457  
29  
h-index

206112  
48  
g-index

73  
all docs

73  
docs citations

73  
times ranked

2162  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling channelized and distributed subglacial drainage in two dimensions. Journal of Geophysical Research F: Earth Surface, 2013, 118, 2140-2158.	2.8	200
2	Surges of glaciers in Iceland. Annals of Glaciology, 2003, 36, 82-90.	1.4	167
3	A multicomponent coupled model of glacier hydrology 1. Theory and synthetic examples. Journal of Geophysical Research, 2002, 107, ECV 9-1-ECV 9-17.	3.3	128
4	Modelling water flow under glaciers and ice sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140907.	2.1	120
5	A numerical study of hydrologically driven glacier dynamics and subglacial flooding. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 537-558.	2.1	97
6	A coupled sheet-conduit mechanism for jökulhlaup propagation. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	89
7	Subglacial erosion and englacial sediment transport modelled for North American ice sheets. Quaternary Science Reviews, 2004, 23, 409-430.	3.0	86
8	Influence of ice-sheet geometry and supraglacial lakes on seasonal ice-flow variability. Cryosphere, 2013, 7, 1185-1192.	3.9	80
9	Five decades of radioglaciology. Annals of Glaciology, 2020, 61, 1-13.	1.4	74
10	Inexpensive laser cooling and trapping experiment for undergraduate laboratories. American Journal of Physics, 1995, 63, 317-330.	0.7	72
11	Estimating Temperature Fields from MODIS Land Surface Temperature and Air Temperature Observations in a Sub-Arctic Alpine Environment. Remote Sensing, 2014, 6, 946-963.	4.0	72
12	Sensitivity of Vatnajökull ice cap hydrology and dynamics to climate warming over the next 2 centuries. Journal of Geophysical Research, 2005, 110, .	3.3	66
13	Present dynamics and future prognosis of a slowly surging glacier. Cryosphere, 2011, 5, 299-313.	3.9	63
14	Spatial and Temporal Transferability of a Distributed Energy-Balance Glacier Melt Model. Journal of Climate, 2011, 24, 1480-1498.	3.2	54
15	A multicomponent coupled model of glacier hydrology 2. Application to Trapridge Glacier, Yukon, Canada. Journal of Geophysical Research, 2002, 107, ECV 10-1-ECV 10-16.	3.3	53
16	Holocene climate conditions and glacier variation in central Iceland from physical modelling and empirical evidence. Quaternary Science Reviews, 2008, 27, 797-813.	3.0	53
17	Simulation of Vatnajökull ice cap dynamics. Journal of Geophysical Research, 2005, 110, .	3.3	49
18	Subglacial modulation of the hydrograph from glacierized basins. Hydrological Processes, 2008, 22, 3903-3918.	2.6	49

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19	A hydrologically coupled higher-order flow-band model of ice dynamics with a Coulomb friction sliding law. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	48
20	The influence of human activity in the Arctic on climate and climate impacts. <i>Climatic Change</i> , 2007, 82, 77-92.	3.6	47
21	Hydrology and the future of the Greenland Ice Sheet. <i>Nature Communications</i> , 2018, 9, 2729.	12.8	47
22	New insights into the subglacial and periglacial hydrology of Vatnajökull, Iceland, from a distributed physical model. <i>Journal of Glaciology</i> , 2003, 49, 257-270.	2.2	45
23	Surface and bed topography of Trapridge Glacier, Yukon Territory, Canada: digital elevation models and derived hydraulic geometry. <i>Journal of Glaciology</i> , 1999, 45, 165-174.	2.2	43
24	Glacier fluctuation and inferred climatology of Langjökull ice cap through the Little Ice Age. <i>Quaternary Science Reviews</i> , 2007, 26, 2337-2353.	3.0	42
25	Efficacy of bedrock erosion by subglacial water flow. <i>Earth Surface Dynamics</i> , 2016, 4, 125-145.	2.4	40
26	Oscillatory subglacial drainage in the absence of surface melt. <i>Cryosphere</i> , 2014, 8, 959-976.	3.9	39
27	An integrated lightweight ice-penetrating radar system. <i>Journal of Glaciology</i> , 2010, 56, 709-714.	2.2	36
28	Seasonal-scale abrasion and quarrying patterns from a two-dimensional ice-flow model coupled to distributed and channelized subglacial drainage. <i>Geomorphology</i> , 2014, 219, 176-191.	2.6	32
29	Dynamics of a small surge-type glacier using one-dimensional geophysical inversion. <i>Journal of Glaciology</i> , 2009, 55, 1101-1112.	2.2	31
30	Clay mineral precipitation and low silica in glacier meltwaters explored through reaction-path modelling. <i>Journal of Glaciology</i> , 2015, 61, 1061-1078.	2.2	31
31	Comparison of thermal structure and evolution between neighboring subarctic glaciers. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 1443-1459.	2.8	30
32	Modeling Sediment Transport in Ice-Walled Subglacial Channels and Its Implications for Esker Formation and Proglacial Sediment Yields. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 3206-3227.	2.8	28
33	A preliminary assessment of glacier melt-model parameter sensitivity and transferability in a dry subarctic environment. <i>Cryosphere</i> , 2011, 5, 1011-1028.	3.9	27
34	Sensitivity of Barnes Ice Cap, Baffin Island, Canada, to climate state and internal dynamics. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1516-1539.	2.8	26
35	Excavation of subglacial bedrock channels by seasonal meltwater flow. <i>Earth Surface Processes and Landforms</i> , 2018, 43, 1960-1972.	2.5	24
36	Environmental controls on the thermal structure of alpine glaciers. <i>Cryosphere</i> , 2013, 7, 167-182.	3.9	23

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37	Effects of Temperature Forcing Provenance and Extrapolation on the Performance of an Empirical Glacier-Melt Model. <i>Arctic, Antarctic, and Alpine Research</i> , 2014, 46, 379-393.	1.1	22
38	The projected demise of Barnes Ice Cap: Evidence of an unusually warm 21st century Arctic. <i>Geophysical Research Letters</i> , 2017, 44, 2810-2816.	4.0	22
39	Evidence for Elevation-Dependent Warming in the St. Elias Mountains, Yukon, Canada. <i>Journal of Climate</i> , 2020, 33, 3253-3269.	3.2	22
40	Surface and bed topography of Trapridge Glacier, Yukon Territory, Canada: digital elevation models and derived hydraulic geometry. <i>Journal of Glaciology</i> , 1999, 45, 165-174.	2.2	22
41	Glacier subsurface heat-flux characterizations for energy-balance modelling in the Donjek Range, southwest Yukon, Canada. <i>Journal of Glaciology</i> , 2011, 57, 121-133.	2.2	21
42	Holocene glacier and climate variations in Vestfirir, Iceland, from the modeling of Drangajökull ice cap. <i>Quaternary Science Reviews</i> , 2018, 190, 39-56.	3.0	18
43	An integrated modelling approach to understanding subglacial hydraulic release events. <i>Annals of Glaciology</i> , 2000, 31, 222-228.	1.4	17
44	Changes in geometry and subglacial drainage derived from digital elevation models: Unteraargletscher, Switzerland, 1927-1997. <i>Annals of Glaciology</i> , 2005, 40, 20-24.	1.4	16
45	Correlations of suspended sediment size with bedrock lithology and glacier dynamics. <i>Annals of Glaciology</i> , 2016, 57, 142-150.	1.4	15
46	Bedrock Fracture Characteristics as a Possible Control on the Distribution of Surge-Type Glaciers. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 853-873.	2.8	14
47	Contemporary Glacier Processes and Global Change: Recent Observations from Kaskawulsh Glacier and the Donjek Range, St. Elias Mountains. <i>Arctic</i> , 2014, 67, 22.	0.4	14
48	Design and Analysis of Experiments on Nonconvex Regions. <i>Technometrics</i> , 2017, 59, 36-47.	1.9	13
49	The Role of Englacial Hydrology in the Filling and Drainage of an Ice-Dammed Lake, Kaskawulsh Glacier, Yukon, Canada. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2019JF005110.	2.8	13
50	Flow Routing for Delineating Supraglacial Meltwater Channel Networks. <i>Remote Sensing</i> , 2016, 8, 988.	4.0	12
51	Modelling intra-annual dynamics of a major marine-terminating Arctic glacier. <i>Annals of Glaciology</i> , 2017, 58, 118-130.	1.4	12
52	Short-term velocity variations and sliding sensitivity of a slowly surging glacier. <i>Annals of Glaciology</i> , 2016, 57, 71-83.	1.4	11
53	Seismologically Observed Spatiotemporal Drainage Activity at Moulins. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9095-9108.	3.4	11
54	Estimating winter balance and its uncertainty from direct measurements of snow depth and density on alpine glaciers. <i>Journal of Glaciology</i> , 2018, 64, 781-795.	2.2	10

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55	Controls on the lifespans of Icelandic ice caps. <i>Earth and Planetary Science Letters</i> , 2019, 527, 115780.	4.4	10
56	A stationary impulse-radar system for autonomous deployment in cold and temperate environments. <i>Annals of Glaciology</i> , 2020, 61, 99-107.	1.4	8
57	Mapping and interpretation of bed-reflection power from a surge-type polythermal glacier, Yukon, Canada. <i>Annals of Glaciology</i> , 2014, 55, 1-8.	1.4	7
58	Glacier hydromechanics: early insights and the lasting legacy of three works by Iken and colleagues. <i>Journal of Glaciology</i> , 2010, 56, 1069-1078.	2.2	5
59	An imbalancing act: the delayed dynamic response of the Kaskawulsh Glacier to sustained mass loss. <i>Journal of Glaciology</i> , 2021, 67, 313-330.	2.2	5
60	Characterization of glacial silt and clay using automated mineralogy. <i>Annals of Glaciology</i> , 2019, 60, 49-65.	1.4	2
61	Kinematic evolution of kilometre-scale fold trains in surge-type glaciers explored with a numerical model. <i>Journal of Structural Geology</i> , 2022, 161, 104644.	2.3	2
62	Canadian Glacier Hydrology, 2003-2007. <i>Canadian Water Resources Journal</i> , 2009, 34, 195-204.	1.2	1
63	Design and Analysis of Experiments on Nonconvex Regions. <i>Technometrics</i> , 2017, , 1-12.	1.9	0
64	Pursuit of Optimal Design for Winter-Balance Surveys of Valley-Glacier Ablation Areas. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	0