

Robin Bell

List of Publications by Year in descending order

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77
papers

4,346
citations

87888

38
h-index

110387

64
g-index

78
all docs

78
docs citations

78
times ranked

3173
citing authors

#	ARTICLE	IF	CITATIONS
1	Large subglacial lakes in East Antarctica at the onset of fast-flowing ice streams. <i>Nature</i> , 2007, 445, 904-907.	27.8	224
2	Influence of subglacial geology on the onset of a West Antarctic ice stream from aerogeophysical observations. <i>Nature</i> , 1998, 394, 58-62.	27.8	203
3	East Antarctic rifting triggers uplift of the Gamburtsev Mountains. <i>Nature</i> , 2011, 479, 388-392.	27.8	198
4	Active volcanism beneath the West Antarctic ice sheet and implications for ice-sheet stability. <i>Nature</i> , 1993, 361, 526-529.	27.8	183
5	Widespread Persistent Thickening of the East Antarctic Ice Sheet by Freezing from the Base. <i>Science</i> , 2011, 331, 1592-1595.	12.6	161
6	The role of subglacial water in ice-sheet mass balance. <i>Nature Geoscience</i> , 2008, 1, 297-304.	12.9	152
7	Widespread movement of meltwater onto and across Antarctic ice shelves. <i>Nature</i> , 2017, 544, 349-352.	27.8	148
8	Origin and fate of Lake Vostok water frozen to the base of the East Antarctic ice sheet. <i>Nature</i> , 2002, 416, 307-310.	27.8	128
9	Antarctic ice shelf potentially stabilized by export of meltwater in surface river. <i>Nature</i> , 2017, 544, 344-348.	27.8	124
10	Ice cover, landscape setting, and geological framework of Lake Vostok, East Antarctica. <i>Earth and Planetary Science Letters</i> , 2003, 205, 195-210.	4.4	123
11	Sub-ice geology inland of the Transantarctic Mountains in light of new aerogeophysical data. <i>Earth and Planetary Science Letters</i> , 2004, 220, 391-408.	4.4	115
12	Antarctic surface hydrology and impacts on ice-sheet mass balance. <i>Nature Climate Change</i> , 2018, 8, 1044-1052.	18.8	112
13	Subglacial sediments: A regional geological template for ice flow in West Antarctica. <i>Geophysical Research Letters</i> , 2001, 28, 3493-3496.	4.0	96
14	Crustal control of ridge segmentation inferred from observations of the Reykjanes Ridge. <i>Nature</i> , 1992, 357, 583-586.	27.8	94
15	Ross Ice Shelf response to climate driven by the tectonic imprint on seafloor bathymetry. <i>Nature Geoscience</i> , 2019, 12, 441-449.	12.9	88
16	Influence of persistent wind scour on the surface mass balance of Antarctica. <i>Nature Geoscience</i> , 2013, 6, 367-371.	12.9	87
17	Patterns of late Cenozoic volcanic and tectonic activity in the West Antarctic rift system revealed by aeromagnetic surveys. <i>Tectonics</i> , 1996, 15, 660-676.	2.8	82
18	Progressive unpinning of Thwaites Glacier from newly identified offshore ridge: Constraints from aerogravity. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	82

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19	CASERTZ aeromagnetic data reveal late Cenozoic flood basalts(?) in the West Antarctic rift system. <i>Geology</i> , 1994, 22, 527.	4.4	78
20	New Magnetic Anomaly Map of the Antarctic. <i>Geophysical Research Letters</i> , 2018, 45, 6437-6449.	4.0	78
21	Estimating the depth and shape of subglacial Lake Vostok's water cavity from aerogravity data. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	76
22	Early East Antarctic Ice Sheet growth recorded in the landscape of the Gamburtsev Subglacial Mountains. <i>Earth and Planetary Science Letters</i> , 2013, 375, 1-12.	4.4	75
23	Geophysical models for the tectonic framework of the Lake Vostok region, East Antarctica. <i>Earth and Planetary Science Letters</i> , 2003, 216, 663-677.	4.4	74
24	Recharge of a subglacial lake by surface meltwater in northeast Greenland. <i>Nature</i> , 2015, 518, 223-227.	27.8	74
25	Gravity gradiometry resurfaces. <i>The Leading Edge</i> , 1997, 16, 55-59.	0.7	70
26	Antarctic crustal thickness from satellite gravity: Implications for the Transantarctic and Gamburtsev Subglacial Mountains. <i>Earth and Planetary Science Letters</i> , 2009, 288, 194-203.	4.4	69
27	Gravity anomalies of sedimentary basins and their mechanical implications: Application to the Ross Sea basins, West Antarctica. <i>Earth and Planetary Science Letters</i> , 2005, 235, 577-596.	4.4	68
28	Deformation, warming and softening of Greenland's ice by refreezing meltwater. <i>Nature Geoscience</i> , 2014, 7, 497-502.	12.9	64
29	Traveling slippery patches produce thickness-scale folds in ice sheets. <i>Geophysical Research Letters</i> , 2014, 41, 8895-8901.	4.0	61
30	Evaluation of the BGM-3 sea gravity meter system onboard R/V Conrad. <i>Geophysics</i> , 1986, 51, 1480-1493.	2.6	57
31	Comparison of AIRGrav and GT-1A airborne gravimeters for research applications. <i>Geophysics</i> , 2008, 73, 151-161.	2.6	57
32	Tectonically controlled subglacial lakes on the flanks of the Gamburtsev Subglacial Mountains, East Antarctica. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	52
33	Extensive winter subglacial water storage beneath the Greenland Ice Sheet. <i>Geophysical Research Letters</i> , 2016, 43, 12,484.	4.0	52
34	Airborne gravimetry: An investigation of filtering. <i>Geophysics</i> , 1999, 64, 61-69.	2.6	50
35	The Scientific Legacy of NASA's Operation IceBridge. <i>Reviews of Geophysics</i> , 2021, 59, e2020RG000712.	23.0	49
36	Process-related classification of acoustic data from the Hudson River Estuary. <i>Marine Geology</i> , 2004, 209, 131-145.	2.1	47

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37	Identification and control of subglacial water networks under Dome A, Antarctica. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 140-154.	2.8	46
38	Bathymetric control of tidewater glacier mass loss in northwest Greenland. <i>Earth and Planetary Science Letters</i> , 2014, 401, 40-46.	4.4	41
39	Ice flow field over Lake Vostok, East Antarctica inferred by structure tracking. <i>Earth and Planetary Science Letters</i> , 2004, 227, 249-261.	4.4	39
40	Freezing of ridges and water networks preserves the Gamburtsev Subglacial Mountains for millions of years. <i>Geophysical Research Letters</i> , 2014, 41, 8114-8122.	4.0	38
41	An International Plan for Antarctic Subglacial Lake Exploration. <i>Polar Geography</i> , 2003, 27, 69-83.	1.9	36
42	Complex Basal Thermal Transition Near the Onset of Petermann Glacier, Greenland. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 985-995.	2.8	35
43	Rerouting of subglacial water flow between neighboring glaciers in West Greenland. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 925-938.	2.8	32
44	History, mass loss, structure, and dynamic behavior of the Antarctic Ice Sheet. <i>Science</i> , 2020, 367, 1321-1325.	12.6	31
45	Early Mesozoic rift basins of eastern North America and their gravity anomalies: The role of detachments during extension. <i>Tectonics</i> , 1988, 7, 447-462.	2.8	30
46	Aeromagnetic evidence for a volcanic caldera(?) Complex beneath the divide of the West Antarctic Ice Sheet. <i>Geophysical Research Letters</i> , 1998, 25, 4385-4388.	4.0	30
47	Influx of meltwater to subglacial Lake Concordia, East Antarctica. <i>Journal of Glaciology</i> , 2005, 51, 96-104.	2.2	30
48	Inversion of IceBridge gravity data for continental shelf bathymetry beneath the Larsen Ice Shelf, Antarctica. <i>Journal of Glaciology</i> , 2012, 58, 540-552.	2.2	30
49	Active lakes of Recovery Ice Stream, East Antarctica: a bedrock-controlled subglacial hydrological system. <i>Journal of Glaciology</i> , 2014, 60, 1015-1030.	2.2	30
50	Evolution of the Seasonal Surface Mixed Layer of the Ross Sea, Antarctica, Observed With Autonomous Profiling Floats. <i>Journal of Geophysical Research: Oceans</i> , 2019, 124, 4934-4953.	2.6	29
51	Shallow-source aeromagnetic anomalies observed over the West Antarctic Ice Sheet compared with coincident bed topography from radar ice sounding—new evidence for glacial “removal” of subglacially erupted late Cenozoic rift-related volcanic edifices. <i>Global and Planetary Change</i> , 2004, 42, 177-193.	3.5	28
52	Using geophysical information to define benthic habitats in a large river. <i>Freshwater Biology</i> , 2006, 51, 25-38.	2.4	24
53	Bathymetry in Petermann fjord from Operation IceBridge aerogravity. <i>Earth and Planetary Science Letters</i> , 2015, 422, 58-66.	4.4	24
54	Environmental change and oyster colonization within the Hudson River estuary linked to Holocene climate. <i>Geo-Marine Letters</i> , 2004, 24, 212-224.	1.1	23

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55	Gravity Gradiometry. Scientific American, 1998, 278, 74-79.	1.0	22
56	Anomalous accumulation rates in the Vostok ice-core resulting from ice flow over Lake Vostok. Geophysical Research Letters, 2004, 31, .	4.0	21
57	The rise and fall of early oil field technology: The torsion balance gradiometer. The Leading Edge, 1998, 17, 81-83.	0.7	19
58	Multidecadal Basal Melt Rates and Structure of the Ross Ice Shelf, Antarctica, Using Airborne Ice Penetrating Radar. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005241.	2.8	19
59	Harassment in science is real. Science, 2017, 358, 1223-1223.	12.6	18
60	Bathymetric and oceanic controls on Abbot Ice Shelf thickness and stability. Cryosphere, 2014, 8, 877-889.	3.9	16
61	Spatial variations in a condensed interval between estuarine and open-marine settings: Holocene Hudson River estuary and adjacent continental shelf. Geology, 2004, 32, 169.	4.4	14
62	Airborne gravity measurement over sea-ice: The Western Weddell Sea. Geophysical Research Letters, 1990, 17, 1941-1944.	4.0	13
63	Estuarine processes and their stratigraphic record: paleosalinity and sedimentation changes in the Hudson Estuary (North America). Marine Geology, 2004, 209, 113-129.	2.1	13
64	Resolving bathymetry from airborne gravity along Greenland fjords. Journal of Geophysical Research: Solid Earth, 2015, 120, 8516-8533.	3.4	13
65	Airborne gravimetry from a small twin engine aircraft over the Long Island Sound. Geophysics, 1991, 56, 1486-1493.	2.6	12
66	Subglacial volcanic features beneath the West Antarctic Ice Sheet interpreted from aeromagnetic and radar ice sounding. Geological Society Special Publication, 2002, 202, 337-355.	1.3	7
67	Detailed Bathymetry of the Continental Shelf Beneath the Getz Ice Shelf, West Antarctica. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005493.	2.8	6
68	Inside the ice shelf: using augmented reality to visualise 3D lidar and radar data of Antarctica. Photogrammetric Record, 2019, 34, 346-364.	0.4	5
69	Seafloor Depth of George VI Sound, Antarctic Peninsula, From Inversion of Aerogravity Data. Geophysical Research Letters, 2020, 47, e2020GL088654.	4.0	5
70	Abbot Ice Shelf, structure of the Amundsen Sea continental margin and the southern boundary of the Bellingshausen Plate seaward of West Antarctica. Geochemistry, Geophysics, Geosystems, 2015, 16, 1421-1438.	2.5	4
71	Sea Ice Freeboard in the Ross Sea from Airborne Altimetry IcePod 2016-2017 and a Comparison with IceBridge 2013 and ICESat 2003-2008. Remote Sensing, 2020, 12, 2226.	4.0	3
72	Crustal structure of the Gamburtsev Province, East Antarctica, from airborne geophysics. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
73	Development of ice-shelf estuaries promotes fractures and calving. Nature Geoscience, 2021, 14, 899-905.	12.9	2
74	Determination of Airborne Nicotine by Automatic Two-Stage Thermal Desorption Gas Chromatography. International Journal of Environmental Analytical Chemistry, 1988, 33, 219-232.	3.3	0
75	Advances in aerogeophysics and precise positioning: Gravity, topography, and high resolution applications. Reviews of Geophysics, 1995, 33, 361.	23.0	0
76	Changes on the ice. Nature, 2016, 530, 507-507.	27.8	0
77	Reply by the authors to L. LaCoste. Geophysics, 1987, 52, 697-697.	2.6	0