

# Adrian J Luckman

## List of Publications by Year in descending order

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121  
papers

9,302  
citations

47006

47  
h-index

42399

92  
g-index

151  
all docs

151  
docs citations

151  
times ranked

7384  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Reconciled Estimate of Ice-Sheet Mass Balance. <i>Science</i> , 2012, 338, 1183-1189.	12.6	1,246
2	Glacier motion estimation using SAR offset-tracking procedures. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2002, 40, 2384-2391.	6.3	490
3	Response of debris-covered glaciers in the Mount Everest region to recent warming, and implications for outburst flood hazards. <i>Earth-Science Reviews</i> , 2012, 114, 156-174.	9.1	449
4	Ocean forcing of glacier retreat in the western Antarctic Peninsula. <i>Science</i> , 2016, 353, 283-286.	12.6	346
5	The glaciers climate change initiative: Methods for creating glacier area, elevation change and velocity products. <i>Remote Sensing of Environment</i> , 2015, 162, 408-426.	11.0	253
6	Early recognition of glacial lake hazards in the Himalaya using remote sensing datasets. <i>Global and Planetary Change</i> , 2007, 56, 137-152.	3.5	252
7	Surface flow evolution throughout a glacier surge measured by satellite radar interferometry. <i>Geophysical Research Letters</i> , 2002, 29, 10-1-10-4.	4.0	237
8	A study of the relationship between radar backscatter and regenerating tropical forest biomass for spaceborne SAR instruments. <i>Remote Sensing of Environment</i> , 1997, 60, 1-13.	11.0	215
9	Calving rates at tidewater glaciers vary strongly with ocean temperature. <i>Nature Communications</i> , 2015, 6, 8566.	12.8	214
10	Rapid and synchronous ice-dynamic changes in East Greenland. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	184
11	Karakoram glacier surge dynamics. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	167
12	Is there a single surge mechanism? Contrasts in dynamics between glacier surges in Svalbard and other regions. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	166
13	Acceleration in thinning rate on western Svalbard glaciers. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	166
14	Quantification of Everest region glacier velocities between 1992 and 2002, using satellite radar interferometry and feature tracking. <i>Journal of Glaciology</i> , 2009, 55, 596-606.	2.2	166
15	Ocean regulation hypothesis for glacier dynamics in southeast Greenland and implications for ice sheet mass changes. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	162
16	Tropical Forest Biomass Density Estimation Using JERS-1 SAR: Seasonal Variation, Confidence Limits, and Application to Image Mosaics. <i>Remote Sensing of Environment</i> , 1998, 63, 126-139.	11.0	144
17	The 1999 and 2000 eruptions of Mount Cameroon: eruption behaviour and petrochemistry of lava. <i>Bulletin of Volcanology</i> , 2003, 65, 267-281.	3.0	136
18	Satellite tracking large numbers of individuals to infer population level dispersal and core areas for the protection of an endangered species. <i>Diversity and Distributions</i> , 2013, 19, 834-844.	4.1	130

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19	The potential of satellite radar interferometry and feature tracking for monitoring flow rates of Himalayan glaciers. <i>Remote Sensing of Environment</i> , 2007, 111, 172-181.	11.0	129
20	Heterogeneity in Karakoram glacier surges. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 1288-1300.	2.8	119
21	Hydrologic response of the Greenland ice sheet: the role of oceanographic warming. <i>Hydrological Processes</i> , 2009, 23, 7-30.	2.6	110
22	Stagnation and mass loss on a Himalayan debris-covered glacier: processes, patterns and rates. <i>Journal of Glaciology</i> , 2016, 62, 467-485.	2.2	109
23	Seasonal variation in velocity before retreat of Jakobshavn Isbr�, Greenland. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	104
24	Blue Reflectance Provides a Surrogate for Latewood Density of High-latitude Pine Tree Rings. <i>Arctic, Antarctic, and Alpine Research</i> , 2002, 34, 450-453.	1.1	103
25	Ice velocity and climate variations for Baltoro Glacier, Pakistan. <i>Journal of Glaciology</i> , 2009, 55, 1061-1071.	2.2	97
26	Glacier dynamics over the last quarter of a century at Helheim, Kangerdlugssuaq and 14 other major Greenland outlet glaciers. <i>Cryosphere</i> , 2012, 6, 923-937.	3.9	94
27	Warming of waters in an East Greenland fjord prior to glacier retreat: mechanisms and connection to large-scale atmospheric conditions. <i>Cryosphere</i> , 2011, 5, 701-714.	3.9	93
28	Surface melt and ponding on Larsen C Ice Shelf and the impact of f�rn winds. <i>Antarctic Science</i> , 2014, 26, 625-635.	0.9	92
29	The response of Petermann Glacier, Greenland, to large calving events, and its future stability in the context of atmospheric and oceanic warming. <i>Journal of Glaciology</i> , 2012, 58, 229-239.	2.2	87
30	The evolution of a submarine landform record following recent and multiple surges of Tunabreen glacier, Svalbard. <i>Quaternary Science Reviews</i> , 2015, 108, 37-50.	3.0	87
31	Englacial drainage systems formed by hydrologically driven crevasse propagation. <i>Journal of Glaciology</i> , 2009, 55, 513-523.	2.2	85
32	Surface structure and stability of the Larsen C ice shelf, Antarctic Peninsula. <i>Journal of Glaciology</i> , 2009, 55, 400-410.	2.2	84
33	A new 100-m Digital Elevation Model of the Antarctic Peninsula derived from ASTER Global DEM: methods and accuracy assessment. <i>Earth System Science Data</i> , 2012, 4, 129-142.	9.9	82
34	Melt-under-cutting and buoyancy-driven calving from tidewater glaciers: new insights from discrete element and continuum model simulations. <i>Journal of Glaciology</i> , 2017, 63, 691-702.	2.2	79
35	A cut-and-closure origin for englacial conduits in uncrevassed regions of polythermal glaciers. <i>Journal of Glaciology</i> , 2009, 55, 66-80.	2.2	75
36	A rapidly growing moraine-dammed glacial lake on Ngozumpa Glacier, Nepal. <i>Geomorphology</i> , 2012, 145-146, 1-11.	2.6	75

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37	Glacier surge dynamics of Sortebr�, east Greenland, from synthetic aperture radar feature tracking. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	73
38	Marine ice regulates the future stability of a large Antarctic ice shelf. <i>Nature Communications</i> , 2014, 5, 3707.	12.8	72
39	Modelling environmental influences on calving at Helheim Glacier in eastern Greenland. <i>Cryosphere</i> , 2014, 8, 827-841.	3.9	71
40	Basal crevasses in Larsen C Ice Shelf and implications for their global abundance. <i>Cryosphere</i> , 2012, 6, 113-123.	3.9	65
41	Intense Winter Surface Melt on an Antarctic Ice Shelf. <i>Geophysical Research Letters</i> , 2018, 45, 7615-7623.	4.0	65
42	Extensive retreat of Greenland tidewater glaciers, 2000��2010. <i>Arctic, Antarctic, and Alpine Research</i> , 2015, 47, 427-447.	1.1	63
43	Massive subsurface ice formed by refreezing of ice-shelf melt ponds. <i>Nature Communications</i> , 2016, 7, 11897.	12.8	63
44	Surge potential and drainage-basin characteristics in East Greenland. <i>Annals of Glaciology</i> , 2003, 36, 142-148.	1.4	62
45	Exploratory study of the relationship between tropical forest regeneration stages and SIR-C L and C data. <i>Remote Sensing of Environment</i> , 1997, 59, 180-190.	11.0	60
46	Structure and evolution of the drainage system of a Himalayan debris-covered glacier, and its relationship with patterns of mass loss. <i>Cryosphere</i> , 2017, 11, 2247-2264.	3.9	58
47	A Full Stokes 3�D Calving Model Applied to a Large Greenlandic Glacier. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 410-432.	2.8	54
48	Present stability of the Larsen C ice shelf, Antarctic Peninsula. <i>Journal of Glaciology</i> , 2010, 56, 593-600.	2.2	52
49	Rapidly changing subglacial hydrological pathways at a tidewater glacier revealed through simultaneous observations of water pressure, supraglacial lakes, meltwater plumes and surface velocities. <i>Cryosphere</i> , 2017, 11, 2691-2710.	3.9	49
50	Calving controlled by melt-under-cutting: detailed calving styles revealed through time-lapse observations. <i>Annals of Glaciology</i> , 2019, 60, 20-31.	1.4	49
51	Dynamics of tidewater surge-type glaciers in northwest Svalbard. <i>Journal of Glaciology</i> , 2012, 58, 110-118.	2.2	46
52	The initiation of glacier surging at Fridtjovbreen, Svalbard. <i>Annals of Glaciology</i> , 2003, 36, 110-116.	1.4	45
53	Glacier dynamics at Helheim and Kangerdlugssuaq glaciers, southeast Greenland, since the Little Ice Age. <i>Cryosphere</i> , 2014, 8, 1497-1507.	3.9	45
54	Modeling the refreezing of meltwater as superimposed ice on a high Arctic glacier: A comparison of approaches. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	44

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55	Marine ice formation in a suture zone on the Larsen C Ice Shelf and its influence on ice shelf dynamics. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 1628-1640.	2.8	43
56	Blue Reflectance Provides a Surrogate for Latewood Density of High-Latitude Pine Tree Rings. <i>Arctic, Antarctic, and Alpine Research</i> , 2002, 34, 450.	1.1	42
57	Extreme behavioural shifts by baboons exploiting risky, resource-rich, human-modified environments. <i>Scientific Reports</i> , 2017, 7, 15057.	3.3	42
58	Glacier Calving in Greenland. <i>Current Climate Change Reports</i> , 2017, 3, 282-290.	8.6	42
59	Texture in airborne SAR imagery of tropical forest and its relationship to forest regeneration stage. <i>International Journal of Remote Sensing</i> , 1997, 18, 1333-1349.	2.9	39
60	Observations of forest stand top height and mean height from interferometric SAR and LiDAR over a conifer plantation at Thetford Forest, UK. <i>International Journal of Remote Sensing</i> , 2007, 28, 1173-1197.	2.9	39
61	Brief Communication: Newly developing rift in Larsen C Ice Shelf presents significant risk to stability. <i>Cryosphere</i> , 2015, 9, 1223-1227.	3.9	39
62	The Impact of Föhn Winds on Surface Energy Balance During the 2010–2011 Melt Season Over Larsen C Ice Shelf, Antarctica. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 12,062.	3.3	39
63	Improvement of Satellite Radar Feature Tracking for Ice Velocity Derivation by Spatial Frequency Filtering. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2007, 45, 2309-2318.	6.3	38
64	Brief Communication: On the magnitude and frequency of Khurdopin glacier surge events. <i>Cryosphere</i> , 2014, 8, 571-574.	3.9	37
65	Tidewater Glacier Surges Initiated at the Terminus. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 1035-1051.	2.8	36
66	Rapid fragmentation of Thwaites Eastern Ice Shelf. <i>Cryosphere</i> , 2022, 16, 2545-2564.	3.9	36
67	Integrated electrical resistivity tomography (ERT) and self-potential (SP) techniques for assessing hydrological processes within glacial lake moraine dams. <i>Journal of Glaciology</i> , 2012, 58, 849-858.	2.2	35
68	Repeat-Pass Interferometric Coherence Measurements of Disturbed Tropical Forest from JERS and ERS Satellites. <i>Remote Sensing of Environment</i> , 2000, 73, 350-360.	11.0	33
69	Classification of forest volume resources using ERS tandem coherence and JERS backscatter data. <i>International Journal of Remote Sensing</i> , 2004, 25, 751-768.	2.9	33
70	Ice dynamics during a surge of Sortebrø, East Greenland. <i>Annals of Glaciology</i> , 2002, 34, 323-329.	1.4	32
71	Accuracy assessment of a large-scale forest cover map of central Siberia from synthetic aperture radar. <i>Canadian Journal of Remote Sensing</i> , 2002, 28, 719-737.	2.4	32
72	ERS SAR feature-tracking measurement of outlet glacier velocities on a regional scale in East Greenland. <i>Annals of Glaciology</i> , 2003, 36, 129-134.	1.4	32

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73	Seasonal dynamic thinning at Helheim Glacier. <i>Earth and Planetary Science Letters</i> , 2015, 415, 47-53.	4.4	31
74	Basal dynamics of Kronebreen, a fast-flowing tidewater glacier in Svalbard: non-local spatio-temporal response to water input. <i>Journal of Glaciology</i> , 2017, 63, 1012-1024.	2.2	31
75	Decline in Surface Melt Duration on Larsen C Ice Shelf Revealed by The Advanced Scatterometer (ASCAT). <i>Earth and Space Science</i> , 2018, 5, 578-591.	2.6	30
76	Annual down-glacier drainage of lakes and water-filled crevasses at Helheim Glacier, southeast Greenland. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1819-1833.	2.8	29
77	Effects of undercutting and sliding on calving: a global approach applied to Kronebreen, Svalbard. <i>Cryosphere</i> , 2018, 12, 609-625.	3.9	29
78	Dynamic vulnerability revealed in the collapse of an Arctic tidewater glacier. <i>Scientific Reports</i> , 2019, 9, 5541.	3.3	29
79	Estimation of tree growth in a conifer plantation over 19 years from multi-satellite L-band SAR. <i>Remote Sensing of Environment</i> , 2003, 84, 184-191.	11.0	26
80	Glacier Calving Rates Due to Subglacial Discharge, Fjord Circulation, and Free Convection. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 2189-2204.	2.8	26
81	Impact of warming shelf waters on ice mélange and terminus retreat at a large SE Greenland glacier. <i>Cryosphere</i> , 2019, 13, 2303-2315.	3.9	26
82	Progress in satellite remote sensing of ice sheets. <i>Progress in Physical Geography</i> , 2009, 33, 547-567.	3.2	23
83	Mass and enthalpy budget evolution during the surge of a polythermal glacier: a test of theory. <i>Journal of Glaciology</i> , 2019, 65, 717-731.	2.2	23
84	Modelling the impact of superimposed ice on the mass balance of an Arctic glacier under scenarios of future climate change. <i>Annals of Glaciology</i> , 2005, 42, 277-283.	1.4	22
85	Two decades of dynamic change and progressive destabilization on the Thwaites Eastern Ice Shelf. <i>Cryosphere</i> , 2021, 15, 5187-5203.	3.9	22
86	The location of the grounding zone of Evans Ice Stream, Antarctica, investigated using SAR interferometry and modelling. <i>Annals of Glaciology</i> , 2009, 50, 35-40.	1.4	21
87	Centuries of intense surface melt on Larsen C Ice Shelf. <i>Cryosphere</i> , 2017, 11, 2743-2753.	3.9	19
88	DEM quality assessment for quantification of glacier surface change. <i>Annals of Glaciology</i> , 2007, 46, 189-194.	1.4	18
89	Intercomparison and Validation of SAR-Based Ice Velocity Measurement Techniques within the Greenland Ice Sheet CCI Project. <i>Remote Sensing</i> , 2018, 10, 929.	4.0	18
90	Familiar face recognition: A comparative study of a connectionist model and human performance. <i>Neurocomputing</i> , 1995, 7, 3-27.	5.9	17

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91	Persistent iceberg groundings in the western Weddell Sea, Antarctica. <i>Remote Sensing of Environment</i> , 2010, 114, 385-391.	11.0	17
92	Multiple Late Holocene surges of a High-Arctic tidewater glacier system in Svalbard. <i>Quaternary Science Reviews</i> , 2018, 201, 162-185.	3.0	17
93	Autonomous underwater vehicle (AUV) observations of recent tidewater glacier retreat, western Svalbard. <i>Marine Geology</i> , 2019, 417, 106009.	2.1	17
94	Monitoring Greenland ice sheet buoyancy-driven calving discharge using glacial earthquakes. <i>Annals of Glaciology</i> , 2019, 60, 75-95.	1.4	17
95	Surge-related topographic change of the glacier Sortebrå, East Greenland, derived from synthetic aperture radar interferometry. <i>Journal of Glaciology</i> , 2003, 49, 381-390.	2.2	16
96	Positive mass balance during the late 20th century on Austfonna, Svalbard, revealed using satellite radar interferometry. <i>Annals of Glaciology</i> , 2007, 46, 117-122.	1.4	16
97	Observationally constrained surface mass balance of Larsen C ice shelf, Antarctica. <i>Cryosphere</i> , 2017, 11, 2411-2426.	3.9	16
98	The 2020 Larsen C Ice Shelf surface melt is a 40-year record high. <i>Cryosphere</i> , 2020, 14, 3551-3564.	3.9	16
99	Urban building height variance from multibaseline ERS coherence. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2003, 41, 2022-2025.	6.3	15
100	Fine-resolution remote-sensing and modelling of Himalayan catchment sustainability. <i>Remote Sensing of Environment</i> , 2007, 107, 430-439.	11.0	15
101	Ice and firn heterogeneity within Larsen C Ice Shelf from borehole optical televiewing. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 1139-1153.	2.8	13
102	What can knowledge of the energy landscape tell us about animal movement trajectories and space use? A case study with humans. <i>Journal of Theoretical Biology</i> , 2018, 457, 101-111.	1.7	13
103	Physical Conditions of Fast Glacier Flow: 3. Seasonally Evolving Ice Deformation on Store Glacier, West Greenland. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019, 124, 245-267.	2.8	13
104	Seawater softening of suture zones inhibits fracture propagation in Antarctic ice shelves. <i>Nature Communications</i> , 2019, 10, 5491.	12.8	11
105	Stable dynamics in a Greenland tidewater glacier over 26 years despite reported thinning. <i>Annals of Glaciology</i> , 2012, 53, 241-248.	1.4	10
106	Airborne SAR monitoring of tree growth in a coniferous plantation. <i>International Journal of Remote Sensing</i> , 2008, 29, 3873-3889.	2.9	8
107	Brief communication: Thwaites Glacier cavity evolution. <i>Cryosphere</i> , 2021, 15, 3317-3328.	3.9	8
108	An updated seabed bathymetry beneath Larsen C Ice Shelf, Antarctic Peninsula. <i>Earth System Science Data</i> , 2020, 12, 887-896.	9.9	8

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109	The structural and dynamic responses of Stange Ice Shelf to recent environmental change. Antarctic Science, 2014, 26, 646-660.	0.9	6
110	A new perspective on how humans assess their surroundings; derivation of head orientation and its role in "framing" the environment. PeerJ, 2015, 3, e908.	2.0	5
111	Mapping deforestation in Amazon with ERS SAR interferometry. , 0, , .		4
112	Deriving forest characteristics using polarimetric InSAR measurements and models. , 2001, , .		4
113	Repeat-pass interferometric coherence measurements of tropical forest from JERS and ERS satellites. , 1998, , .		3
114	Introducing a landcover map of Siberia derived from MERIS and MODIS data. , 0, , .		2
115	Biomass estimation of Thetford forest from L-band SAR data: potential and limitations. , 0, , .		1
116	Systems Analysis of complex glaciological processes and application to calving of Amery Ice Shelf, East Antarctica. Annals of Glaciology, 2017, 58, 60-71.	1.4	1
117	Reassessment of the age and depositional origin of the Paviland Moraine, Gower, south Wales, UK. Boreas, 2018, 47, 577-592.	2.4	1
118	A Real-Time Image Acquisition And Processing System For A RISC-Based Microcomputer. Proceedings of SPIE, 1989, , .	0.8	0
119	Modelling Peripheral Pre-Attention And Foveal Fixation For Search Directed Machine Vision Systems. Proceedings of SPIE, 1990, 1197, 99.	0.8	0
120	A simple model for the estimation of biomass density of regenerating tropical forest using JERS-1 SAR and its application to Amazon region image mosaics. , 0, , .		0
121	Modelling the mass budget and future evolution of Tunabreen, central Spitsbergen. Cryosphere, 2022, 16, 2115-2126.	3.9	0