Laurence Padman

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Antarctic ice-sheet loss driven by basal melting of ice shelves. Nature, 2012, 484, 502-505.	27.8	1,051
2	Volume loss from Antarctic ice shelves is accelerating. Science, 2015, 348, 327-331.	12.6	575
3	An Active Subglacial Water System in West Antarctica Mapped from Space. Science, 2007, 315, 1544-1548.	12.6	406
4	Accuracy assessment of global barotropic ocean tide models. Reviews of Geophysics, 2014, 52, 243-282.	23.0	338
5	A new tide model for the Antarctic ice shelves and seas. Annals of Glaciology, 2002, 34, 247-254.	1.4	331
6	Ice-shelf collapse from subsurface warming as a trigger for Heinrich events. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13415-13419.	7.1	278
7	Tidally Controlled Stick-Slip Discharge of a West Antarctic Ice. Science, 2003, 301, 1087-1089.	12.6	260
8	A barotropic inverse tidal model for the Arctic Ocean. Geophysical Research Letters, 2004, 31, .	4.0	246
9	Toward Quantifying the Increasing Role of Oceanic Heat in Sea Ice Loss in the New Arctic. Bulletin of the American Meteorological Society, 2015, 96, 2079-2105.	3.3	217
10	Ice shelf water overflow and bottom water formation in the southern Weddell Sea. Journal of Geophysical Research, 2004, 109, .	3.3	196
11	Getting around Antarctica: new high-resolution mappings of the grounded and freely-floating boundaries of the Antarctic ice sheet created for the International Polar Year. Cryosphere, 2011, 5, 569-588.	3.9	187
12	Interannual variations in meltwater input to the Southern Ocean from Antarctic ice shelves. Nature Geoscience, 2020, 13, 616-620.	12.9	169
13	Ice shelf grounding zone structure from ICESat laser altimetry. Geophysical Research Letters, 2006, 33, .	4.0	139
14	Vertical heat fluxes through the Beaufort Sea thermohaline staircase. Journal of Geophysical Research, 1987, 92, 10799-10806.	3.3	127
15	Mapping the grounding zone of the Amery Ice Shelf, East Antarctica using InSAR, MODIS and ICESat. Antarctic Science, 2009, 21, 515-532.	0.9	124
16	Melting and freezing beneath Filchner-Ronne Ice Shelf, Antarctica. Geophysical Research Letters, 2003, 30, .	4.0	123
17	Ocean Tide Influences on the Antarctic and Greenland Ice Sheets. Reviews of Geophysics, 2018, 56, 142-184.	23.0	119
18	Response of Pacific-sector Antarctic ice shelves to the El NiÃ±o/Southern Oscillation. Nature Geoscience, 2018, 11, 121-126.	12.9	117

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19	Turbulent mixing near the Yermak Plateau during the Coordinated Eastern Arctic Experiment. Journal of Geophysical Research, 1991, 96, 4769-4782.	3.3	106
20	Mapping the grounding zone of the Ross Ice Shelf, Antarctica, using ICESat laser altimetry. Annals of Glaciology, 2010, 51, 71-79.	1.4	100
21	The Application of Internal-Wave Dissipation Models to a Region of Strong Mixing. Journal of Physical Oceanography, 1993, 23, 269-286.	1.7	94
22	Tides of the northwestern Ross Sea and their impact on dense outflows of Antarctic Bottom Water. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 818-834.	1.4	93
23	Diurnal tides near the Yermak Plateau. Journal of Geophysical Research, 1992, 97, 12639-12652.	3.3	90
24	Ross Ice Shelf response to climate driven by the tectonic imprint on seafloor bathymetry. Nature Geoscience, 2019, 12, 441-449.	12.9	88
25	Tides of the Ross Sea and Ross Ice Shelf cavity. Antarctic Science, 2003, 15, 31-40.	0.9	87
26	Basal mass budget of Ross and Filchnerâ€Ronne ice shelves, Antarctica, derived from Lagrangian analysis of ICESat altimetry. Journal of Geophysical Research F: Earth Surface, 2014, 119, 2361-2380.	2.8	86
27	Tidally driven stickâ€“slip motion in the mouth of Whillans Ice Stream, Antarctica. Annals of Glaciology, 2003, 36, 263-272.	1.4	84
28	Improving Antarctic tide models by assimilation of ICESat laser altimetry over ice shelves. Geophysical Research Letters, 2008, 35, .	4.0	84
29	Weakening of Cold Halocline Layer Exposes Sea Ice to Oceanic Heat in the Eastern Arctic Ocean. Journal of Climate, 2020, 33, 8107-8123.	3.2	82
30	The Antarctic Zone Flux Experiment. Bulletin of the American Meteorological Society, 1996, 77, 1221-1232.	3.3	73
31	Accuracy assessment of ocean tide models around Antarctica. Geophysical Research Letters, 2005, 32, .	4.0	72
32	Tides in the Weddell Sea. Antarctic Research Series, 0, , 341-369.	0.2	69
33	Interannual changes of the floating ice shelf of Petermann Gletscher, North Greenland, from 2000 to 2012. Journal of Glaciology, 2014, 60, 489-499.	2.2	68
34	Thermohaline variability and Antarctic bottom water formation at the Ross Sea shelf break. Deep-Sea Research Part I: Oceanographic Research Papers, 2011, 58, 1002-1018.	1.4	66
35	Oceanic controls on the mass balance of Wilkins Ice Shelf, Antarctica. Journal of Geophysical Research, 2012, 117, .	3.3	62
36	Mooring-Based Observations of Double-Diffusive Staircases over the Laptev Sea Slope*. Journal of Physical Oceanography, 2012, 42, 95-109.	1.7	62

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37	A dense water outflow from the Ross Sea, Antarctica: Mixing and the contribution of tides. Journal of Marine Systems, 2009, 77, 369-387.	2.1	61
38	Impact of tideâ€•topography interactions on basal melting of Larsen C Ice Shelf, Antarctica. Journal of Geophysical Research, 2012, 117, .	3.3	61
39	Variable Basal Melt Rates of Antarctic Peninsula Ice Shelves, 1994â€“2016. Geophysical Research Letters, 2018, 45, 4086-4095.	4.0	60
40	Fine structure, microstructure, and vertical mixing processes in the upper ocean in the western Weddell Sea. Journal of Geophysical Research, 1995, 100, 18517.	3.3	59
41	Ice-shelf elevation changes due to atmospheric pressure variations. Journal of Glaciology, 2003, 49, 521-526.	2.2	57
42	Ocean variability contributing to basal melt rate near the ice front of Ross Ice Shelf, Antarctica. Journal of Geophysical Research: Oceans, 2014, 119, 4214-4233.	2.6	57
43	Maud Rise revisited. Journal of Geophysical Research, 2001, 106, 2423-2440.	3.3	56
44	Thermal microstructure and internal waves in the Canada Basin diffusive staircase. Deep-sea Research Part A, Oceanographic Research Papers, 1989, 36, 531-542.	1.5	53
45	Water mass modification over the continental shelf north of Ronne Ice Shelf, Antarctica. Journal of Geophysical Research, 2003, 108, .	3.3	53
46	Winter Convection Transports Atlantic Water Heat to the Surface Layer in the Eastern Arctic Ocean*. Journal of Physical Oceanography, 2013, 43, 2142-2155.	1.7	51
47	Thirty years of elevation change on Antarctic Peninsula ice shelves from multimission satellite radar altimetry. Journal of Geophysical Research, 2012, 117, .	3.3	51
48	Mixing in the pycnocline over the western Antarctic Peninsula shelf during Southern Ocean GLOBEC. Deep-Sea Research Part II: Topical Studies in Oceanography, 2004, 51, 1965-1979.	1.4	50
49	Observation of ocean tides below the Filchner and Ronne Ice Shelves, Antarctica, using synthetic aperture radar interferometry: Comparison with tide model predictions. Journal of Geophysical Research, 2000, 105, 19615-19630.	3.3	48
50	High-frequency ice motion and divergence in the Weddell Sea. Journal of Geophysical Research, 2000, 105, 3379-3400.	3.3	46
51	Analysis of ice plains of the Filchnerâ€“Ronne Ice Shelf, Antarctica, using ICESat laser altimetry. Journal of Glaciology, 2011, 57, 965-975.	2.2	46
52	Role of tides on the formation of the <scp>A</scp>ntarctic <scp>S</scp>lope <scp>F</scp>ront at the <scp>W</scp>eddellâ€•<scp>S</scp>cotia Confluence. Journal of Geophysical Research: Oceans, 2015, 120, 3658-3680.	2.6	41
53	On the Horizontal Extent of the Canada Basin Thermohaline Steps. Journal of Physical Oceanography, 1988, 18, 1458-1462.	1.7	40
54	Hydrography and microstructure of an Arctic cyclonic eddy. Journal of Geophysical Research, 1990, 95, 9411-9420.	3.3	40

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55	Seals map bathymetry of the Antarctic continental shelf. Geophysical Research Letters, 2010, 37, .	4.0	40
56	Ocean forced variability of Totten Glacier mass loss. Geological Society Special Publication, 2018, 461, 175-186.	1.3	36
57	Some statistical and dynamical properties of turbulence in the oceanic pycnocline. Journal of Geophysical Research, 1993, 98, 22665-22679.	3.3	35
58	Summer upwelling on the Sydney inner continental shelf: The relative roles of local wind forcing and mesoscale eddy encroachment. Continental Shelf Research, 1991, 11, 321-345.	1.8	34
59	Tidal influences on a future evolution of the Filchnerâ€“Ronne Ice Shelf cavity in the Weddell Sea, Antarctica. Cryosphere, 2018, 12, 453-476.	3.9	33
60	Summer surface melt thins Petermann Gletscher Ice Shelf by enhancing channelized basal melt. Journal of Glaciology, 2019, 65, 662-674.	2.2	33
61	The Ice Shelf of Petermann Gletscher, North Greenland, and Its Connection to the Arctic and Atlantic Oceans. , 2016, 29, 84-95.		32
62	Constructing improved decadal records of Antarctic ice shelf height change from multiple satellite radar altimeters. Remote Sensing of Environment, 2016, 177, 192-205.	11.0	32
63	Tidally Forced Lee Waves Drive Turbulent Mixing Along the Arctic Ocean Margins. Geophysical Research Letters, 2020, 47, e2020GL088083.	4.0	32
64	Intensification of Nearâ€Surface Currents and Shear in the Eastern Arctic Ocean. Geophysical Research Letters, 2020, 47, e2020GL089469.	4.0	32
65	Internal waves and tides in the western Weddell Sea: Observations from Ice Station Weddell. Journal of Geophysical Research, 1997, 102, 1073-1089.	3.3	31
66	RADARSAT interferometry for Antarctic grounding-zone mapping. Annals of Glaciology, 2002, 34, 269-276.	1.4	31
67	Small-scale physical processes in the Arctic Ocean. Coastal and Estuarine Studies, 1995, , 97-129.	0.4	30
68	Tides on Filchner-Ronne Ice Shelf from ERS radar altimetry. Geophysical Research Letters, 2002, 29, 60-1.	4.0	30
69	Influence of tides on sea ice in the Weddell Sea: Investigations with a high-resolution dynamic-thermodynamic sea ice model. Journal of Geophysical Research, 2005, 110, .	3.3	30
70	Assimilation of Ship-Mounted ADCP Data for Barotropic Tides: Application to the Ross Sea. Journal of Atmospheric and Oceanic Technology, 2005, 22, 721-734.	1.3	29
71	Ocean tides in the Weddell Sea: New observations on the Filchner-Ronne and Larsen C ice shelves and model validation. Journal of Geophysical Research, 2011, 116, .	3.3	29
72	Evolution of the Seasonal Surface Mixed Layer of the Ross Sea, Antarctica, Observed With Autonomous Profiling Floats. Journal of Geophysical Research: Oceans, 2019, 124, 4934-4953.	2.6	29

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73	Momentum fluxes through sheared oceanic thermohaline steps. Journal of Geophysical Research, 1994, 99, 22491.	3.3	28
74	Seasonal control of Petermann Gletscher ice-shelf melt by the ocean's response to sea-ice cover in Nares Strait. Journal of Glaciology, 2017, 63, 324-330.	2.2	26
75	A 4â€decade record of elevation change of the Amery Ice Shelf, East Antarctica. Journal of Geophysical Research, 2009, 114, .	3.3	25
76	Upper ocean diapycnal mixing in the northwestern Weddell Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 4843-4861.	1.4	24
77	Tides on the Ross Ice Shelf observed with ICESat. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	23
78	Internal tide generation along the South Scotia Ridge. Deep-Sea Research Part II: Topical Studies in Oceanography, 2006, 53, 157-171.	1.4	23
79	Impacts of bottom corrugations on a dense Antarctic outflow: NW Ross Sea. Geophysical Research Letters, 2009, 36, .	4.0	23
80	Structure and dynamics of mesoscale eddies over the Laptev Sea continental slope in the Arctic Ocean. Ocean Science, 2018, 14, 1329-1347.	3.4	22
81	Eastern Arctic Ocean Diapycnal Heat Fluxes through Large Double-Diffusive Steps. Journal of Physical Oceanography, 2019, 49, 227-246.	1.7	22
82	Turbulent mixing in Barrow Strait. Continental Shelf Research, 1999, 19, 205-245.	1.8	21
83	A Correction to the Baroclinic Pressure Gradient Term in the Princeton Ocean Model. Journal of Atmospheric and Oceanic Technology, 2001, 18, 1068-1075.	1.3	19
84	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
85	Richardson Number Statistics in the Seasonal Thermocline. Journal of Physical Oceanography, 1985, 15, 844-854.	1.7	18
86	Southern Ocean shelf slope exchange. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 775-777.	1.4	17
87	Persistent iceberg groundings in the western Weddell Sea, Antarctica. Remote Sensing of Environment, 2010, 114, 385-391.	11.0	17
88	Modeling Ocean Eddies on Antarctica's Cold Water Continental Shelves and Their Effects on Ice Shelf Basal Melting. Journal of Geophysical Research: Oceans, 2019, 124, 5067-5084.	2.6	14
89	Arctic tidal current atlas. Scientific Data, 2020, 7, 275.	5.3	14
90	Extracting tidal variability of sea ice concentration from AMSR-E passive microwave single-swath data: a case study of the Ross Sea. Geophysical Research Letters, 2013, 40, 547-552.	4.0	13

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91	Topographic vorticity waves forced by Antarctic dense shelf water outflows. Geophysical Research Letters, 2014, 41, 1247-1254.	4.0	13
92	Tidal Modulation of Buoyant Flow and Basal Melt Beneath Petermann Gletscher Ice Shelf, Greenland. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016427.	2.6	13
93	Modeled ocean circulation in <scp>N</scp>ares <scp>S</scp>trait and its dependence on landfastâ€ice cover. Journal of Geophysical Research: Oceans, 2015, 120, 7934-7959.	2.6	12
94	Tidal Pressurization of the Ocean Cavity Near an Antarctic Ice Shelf Grounding Line. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015562.	2.6	12
95	Oceanic Routing of Wind-Sourced Energy Along the Arctic Continental Shelves. Frontiers in Marine Science, 2020, 7, .	2.5	11
96	Wave inhibition by sea ice enables trans-Atlantic ice rafting of debris during Heinrich events. Earth and Planetary Science Letters, 2018, 495, 157-163.	4.4	8
97	Semidiurnal internal tides in eastern Bass Strait. Marine and Freshwater Research, 1983, 34, 159.	1.3	8
98	Influence of Sea State and Tidal Height on Wave Power Absorption. IEEE Journal of Oceanic Engineering, 2017, 42, 566-573.	3.8	7
99	Annual cycle in flow of Ross Ice Shelf, Antarctica: contribution of variable basal melting. Journal of Glaciology, 2020, 66, 861-875.	2.2	7
100	The structural and dynamic responses of Stange Ice Shelf to recent environmental change. Antarctic Science, 2014, 26, 646-660.	0.9	6
101	Flow splitting in numerical simulations of oceanic dense-water outflows. Ocean Modelling, 2017, 113, 66-84.	2.4	5
102	A clustering-based approach to ocean modelâ€"data comparison around Antarctica. Ocean Science, 2021, 17, 131-145.	3.4	5
103	Correction to â€œOcean tides in the Weddell Sea: New observations on the Filchner-Ronne and Larsen C ice shelves and model validationâ€. Journal of Geophysical Research, 2011, 116, .	3.3	4
104	Buoyancyâ€Driven Flexure at the Front of Ross Ice Shelf, Antarctica, Observed With ICESatâ€2 Laser Altimetry. Geophysical Research Letters, 2021, 48, e2020GL091207.	4.0	1
105	Near-surface mixing in a freshwater lake. Marine and Freshwater Research, 1991, 42, 655.	1.3	1
106	Understanding Arctic Ocean Processes Under Changing Ice Cover. Eos, 2014, 95, 316-317.	0.1	0
107	Thank You to Our 2019 Reviewers. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016312.	2.6	0
108	Thank You to Our 2020 Reviewers. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017288.	2.6	0

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109	Thank You to Our 2021 Reviewers. Journal of Geophysical Research: Oceans, 2022, 127, .	2.6	0