Daniel L Feltham

List of Publications by Year
in descending order

#	Article	IF	Citations
1	September Arctic sea-ice minimum predicted by spring melt-pond fraction. Nature Climate Change, 2014, 4, 353-357.	18.8	177
2	The frequency and extent of sub-ice phytoplankton blooms in the Arctic Ocean. Science Advances, 2017, 3, e1601191.	10.3	159
3	Impact of Variable Atmospheric and Oceanic Form Drag on Simulations of Arctic Sea Ice*. Journal of Physical Oceanography, 2014, 44, 1329-1353.	1.7	152
4	Sea Ice Rheology. Annual Review of Fluid Mechanics, 2008, 40, 91-112.	25.0	105
5	Incorporation of a physically based melt pond scheme into the sea ice component of a climate model. Journal of Geophysical Research, 2010, 115, .	3.3	85
6	Impact of a new anisotropic rheology on simulations of Arctic sea ice. Journal of Geophysical Research: Oceans, 2013, 118, 91-107.	2.6	83
7	Impact of melt ponds on Arctic sea ice simulations from 1990 to 2007. Journal of Geophysical Research, 2012, 117, .	3.3	80
8	Sea-ice-free Arctic during the Last Interglacial supports fast future loss. Nature Climate Change, 2020, 10, 928-932.	18.8	71
9	The long-term stability of a possible aqueous ammonium sulfate ocean inside Titan. Icarus, 2008, 197, 137-151.	2.5	69
10	The impact of variable sea ice roughness on changes in <scp>A</scp>rctic <scp>O</scp>cean surface stress: A model study. Journal of Geophysical Research: Oceans, 2016, 121, 1931-1952.	2.6	66
11	Granular flow in the marginal ice zone. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2005, 363, 1677-1700.	3.4	53
12	Impact of Atmospheric Forcing on Antarctic Continental Shelf Water Masses. Journal of Physical Oceanography, 2013, 43, 920-940.	1.7	51
13	The Effects of Rotation and Ice Shelf Topography on Frazil-Laden Ice Shelf Water Plumes. Journal of Physical Oceanography, 2006, 36, 2312-2327.	1.7	50
14	Optimization of a Sea Ice Model Using Basinwide Observations of Arctic Sea Ice Thickness, Extent, and Velocity. Journal of Climate, 2006, 19, 1089-1108.	3.2	49
15	A continuum model of melt pond evolution on Arctic sea ice. Journal of Geophysical Research, 2007, 112, .	3.3	46
16	Skillful spring forecasts of September Arctic sea ice extent using passive microwave sea ice observations. Earth's Future, 2017, 5, 254-263.	6.3	45
17	Modelling the rheology of sea ice as a collection of diamond-shaped floes. Journal of Non-Newtonian Fluid Mechanics, 2006, 138, 22-32.	2.4	44
18	Sea ice and the ocean mixed layer over the Antarctic shelf seas. Cryosphere, 2014, 8, 761-783.	3.9	43

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19	Processes controlling surface, bottom and lateral melt of Arctic sea ice in a state of the art sea ice model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140167.	3.4	43
20	Impact of sea ice floe size distribution on seasonal fragmentation and melt of Arctic sea ice. Cryosphere, 2020, 14, 403-428.	3.9	42
21	An inter-comparison of the mass budget of the Arctic sea ice in CMIP6 models. Cryosphere, 2021, 15, 951-982.	3.9	42
22	The influence of ocean flow on newly forming sea ice. Journal of Geophysical Research, 2002, 107, 1-1.	3.3	41
23	Warm winter, thin ice?. Cryosphere, 2018, 12, 1791-1809.	3.9	41
24	Frazil dynamics and precipitation in a water column with depth-dependent supercooling. Journal of Fluid Mechanics, 2005, 530, 101-124.	3.4	40
25	Modelling the reorientation of sea-ice faults as the wind changes direction. Annals of Glaciology, 2011, 52, 83-90.	1.4	40
26	Flow-induced morphological instability of a mushy layer. Journal of Fluid Mechanics, 1999, 391, 337-357.	3.4	38
27	Characterizing Arctic sea ice topography using high-resolution IceBridge data. Cryosphere, 2016, 10, 1161-1179.	3.9	37
28	A continuum anisotropic model of sea-ice dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 2105-2140.	2.1	35
29	Eddy-Driven Exchange between the Open Ocean and a Subâ€“Ice Shelf Cavity. Journal of Physical Oceanography, 2013, 43, 2372-2387.	1.7	34
30	Recent multivariate changes in the North Atlantic climate system, with a focus on 2005â€“2016. International Journal of Climatology, 2018, 38, 5050-5076.	3.5	34
31	New insight from CryoSat-2 sea ice thickness for sea ice modelling. Cryosphere, 2019, 13, 125-139.	3.9	31
32	The refreezing of melt ponds on <scp>A</scp>rctic sea ice. Journal of Geophysical Research: Oceans, 2015, 120, 647-659.	2.6	29
33	A multi-model CMIP6-PMIP4 study of Arctic sea ice at 127â€‰ka: sea ice data compilation and model differences. Climate of the Past, 2021, 17, 37-62.	3.4	29
34	Changes of the Arctic marginal ice zone during the satellite era. Cryosphere, 2020, 14, 1971-1984.	3.9	29
35	Ice Shelf Water plume flow beneath Filchner-Ronne Ice Shelf, Antarctica. Journal of Geophysical Research, 2007, 112, .	3.3	28
36	Effect of shear rupture on aggregate scale formation in sea ice. Journal of Geophysical Research, 2010, 115, .	3.3	27

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37	Improving the spatial distribution of modeled Arctic sea ice thickness. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	22
38	The Future of Sea Ice Modeling: Where Do We Go from Here?. Bulletin of the American Meteorological Society, 2020, 101, E1304-E1311.	3.3	22
39	Analytical and numerical solutions describing the inward solidification of a binary melt. Chemical Engineering Science, 2001, 56, 2357-2370.	3.8	21
40	Travelling waves in a model of species migration. Applied Mathematics Letters, 2000, 13, 67-73.	2.7	20
41	Study of the Impact of Ice Formation in Leads upon the Sea Ice Pack Mass Balance Using a New Frazil and Grease Ice Parameterization. Journal of Physical Oceanography, 2015, 45, 2025-2047.	1.7	20
42	A Mathematical Model of Melt Lake Development on an Ice Shelf. Journal of Advances in Modeling Earth Systems, 2018, 10, 262-283.	3.8	19
43	Similarity solutions describing the melting of a mushy layer. Journal of Crystal Growth, 2000, 208, 746-756.	1.5	16
44	Modeling Coulombic failure of sea ice with leads. Journal of Geophysical Research, 2011, 116, .	3.3	16
45	The Response of the Sea Ice Edge to Atmospheric and Oceanic Jet Formation. Journal of Physical Oceanography, 2014, 44, 2292-2316.	1.7	15
46	Modelling the fate of surface melt on the Larsen C Ice Shelf. Cryosphere, 2018, 12, 3565-3575.	3.9	15
47	Anisotropic model for granulated sea ice dynamics. Journal of the Mechanics and Physics of Solids, 2006, 54, 1147-1185.	4.8	14
48	Numerical simulation of the Filchner overflow. Journal of Geophysical Research, 2009, 114, .	3.3	14
49	Should Sea-Ice Modeling Tools Designed for Climate Research Be Used for Short-Term Forecasting?. Current Climate Change Reports, 2020, 6, 121-136.	8.6	14
50	Critical slip and time dependence in sea ice friction. Cold Regions Science and Technology, 2013, 90-91, 9-13.	3.5	13
51	Modeling Sea Ice. Notices of the American Mathematical Society, 2020, 67, 1.	0.2	13
52	On the Nusselt number for frazil ice growthâ€"a correction to â€Frazil evolution in channelsâ€œ by Lars Hammar and Hung-Tao Shen. Journal of Hydraulic Research/De Recherches Hydrauliques, 2007, 45, 421-424.	1.7	12
53	Consistent and contrasting decadal Arctic sea ice thickness predictions from a highly optimized sea ice model. Journal of Geophysical Research, 2007, 112, .	3.3	12
54	A Model of Sea Ice Formation in Leads and Polynyas. Journal of Physical Oceanography, 2017, 47, 1701-1718.	1.7	12

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55	Dependence of Sea Ice Yield-Curve Shape on Ice Thickness. Journal of Physical Oceanography, 2004, 34, 2852-2856.	1.7	11
56	A Multithickness Sea Ice Model Accounting for Sliding Friction. Journal of Physical Oceanography, 2006, 36, 1719-1738.	1.7	11
57	A MATHEMATICAL ANALYSIS OF A MINIMAL MODEL OF NEMATODE MIGRATION IN SOIL. Journal of Biological Systems, 2002, 10, 15-32.	1.4	9
58	Generation of a Buoyancy-Driven Coastal Current by an Antarctic Polynya. Journal of Physical Oceanography, 2008, 38, 1011-1032.	1.7	8
59	Rheology of Discrete Failure Regimes of Anisotropic Sea Ice. Journal of Physical Oceanography, 2012, 42, 1065-1082.	1.7	7
60	Modelling of sea-ice phenomena. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20180157.	3.4	7
61	Sea Iceâ€"Ocean Feedbacks in the Antarctic Shelf Seas. Journal of Physical Oceanography, 2019, 49, 2423-2446.	1.7	6
62	Sea ice floe size: its impact on pan-Arctic and local ice mass and required model complexity. Cryosphere, 2022, 16, 2565-2593.	3.9	6
63	Stability of an ice sheet on an elastic bed. European Journal of Mechanics, B/Fluids, 2004, 23, 681-694.	2.5	5
64	A mathematical model of crystallization in an emulsion. Journal of Chemical Physics, 2005, 122, 174910.	3.0	5
65	Sea Ice Formation in a Coupled Climate Model Including Grease Ice. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002103.	3.8	5
66	Impact of Granular Behaviour of Fragmented Sea Ice on Marginal Ice Zone Dynamics. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2022, , 261-274.	0.2	5
67	Analytical solutions of a minimal model of species migration in a bounded domain. Journal of Mathematical Biology, 2000, 40, 321-342.	1.9	4
68	Multiple stationary solutions of an irradiated slab. Journal of Crystal Growth, 2005, 276, 688-697.	1.5	3
69	The Effect of a New Drag-Law Parameterization on Ice Shelf Water Plume Dynamics. Journal of Physical Oceanography, 2007, 37, 1778-1792.	1.7	3
70	Impacts of Oceanic and Atmospheric Heat Transports on Sea Ice Extent. Journal of Climate, 2020, 33, 7197-7215.	3.2	3
71	Micromechanics of sea ice frictional slip from test basin scale experiments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20150354.	3.4	2
72	Different mechanisms of Arctic and Antarctic sea ice response to ocean heat transport. Climate Dynamics, 2022, 59, 315-329.	3.8	1

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73	Influence of Mass Diffusion in Sea Ice Dynamical Models. Journal of Physical Oceanography, 2004, 34, 1468-1475.	1.7	0
74	Corrugations of the Sea-Ice-Ocean Interface Caused By Ocean Shear. , 1999, , 285-287.		0