Stephen E L Howell

List of Publications by Year
in descending order

69 papers	10,433 citations	172457 29 h-index	98798 67 g-index
90 all docs	90 docs citations	90 times ranked	16295 citing authors

#	Article	IF	Citations
1	Anomalous collapses of Nares Strait ice arches leads to enhanced export of Arctic sea ice. Nature Communications, 2021, 12, 1.	12.8	8,040
2	Temporal and Spatial Patterns of Ship Traffic in the Canadian Arctic from 1990 to 2015 + Supplementary Appendix 1: Figs. S1â€“S7 (See Article Tools). Arctic, 2018, 71, .	0.4	124
3	Changing sea ice conditions and marine transportation activity in Canadian Arctic waters between 1990 and 2012. Climatic Change, 2014, 123, 161-173.	3.6	123
4	Trends and variability in summer sea ice cover in the Canadian Arctic based on the Canadian Ice Service Digital Archive, 1960â€“2008 and 1968â€“2008. Journal of Geophysical Research, 2011, 116, .	3.3	116
5	The influence of declining sea ice on shipping activity in the Canadian Arctic. Geophysical Research Letters, 2016, 43, 12,146.	4.0	108
6	The use of operational ice charts for evaluating passive microwave ice concentration data. Atmosphere - Ocean, 2003, 41, 317-331.	1.6	105
7	Sea ice conditions and melt season duration variability within the Canadian Arctic Archipelago: 1979â€“2008. Geophysical Research Letters, 2009, 36, .	4.0	95
8	Canadian snow and sea ice: historical trends and projections. Cryosphere, 2018, 12, 1157-1176.	3.9	95
9	Variability and change in the Canadian cryosphere. Climatic Change, 2012, 115, 59-88.	3.6	79
10	Variability in ice phenology on Great Bear Lake and Great Slave Lake, Northwest Territories, Canada, from SeaWinds/QuikSCAT: 2000â€“2006. Remote Sensing of Environment, 2009, 113, 816-834.	11.0	78
11	Ice thickness in the Northwest Passage. Geophysical Research Letters, 2015, 42, 7673-7680.	4.0	72
12	Recent changes in the exchange of sea ice between the Arctic Ocean and the Canadian Arctic Archipelago. Journal of Geophysical Research: Oceans, 2013, 118, 3595-3607.	2.6	69
13	Regional variability of a projected sea iceâ€free Arctic during the summer months. Geophysical Research Letters, 2016, 43, 256-263.	4.0	66
14	Effect of Snow Salinity on CryoSatâ€2 Arctic Firstâ€Year Sea Ice Freeboard Measurements. Geophysical Research Letters, 2017, 44, 10,419.	4.0	63
15	Surface-Based Polarimetric C-Band Scatterometer for Field Measurements of Sea Ice. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 3405-3416.	6.3	62
16	Impact of 1, 2 and 4â€‰Â°C of global warming on ship navigation in the Canadian Arctic. Nature Climate Change, 2021, 11, 673-679.	18.8	61
17	Separability of sea ice types from wide swath C- and L-band synthetic aperture radar imagery acquired during the melt season. Remote Sensing of Environment, 2016, 174, 314-328.	11.0	57
18	Extending the QuikSCAT record of seasonal meltâ€“freeze transitions over Arctic sea ice using ASCAT. Remote Sensing of Environment, 2014, 141, 214-230.	11.0	50

#	Article	IF	Citations
19	Application of a SeaWinds/QuikSCAT sea ice melt algorithm for assessing melt dynamics in the Canadian Arctic Archipelago. Journal of Geophysical Research, 2006, 111, .	3.3	48
20	Intercomparison of snow depth retrievals over Arctic sea ice from radar data acquired by Operation IceBridge. Cryosphere, 2017, 11, 2571-2593.	3.9	48
21	Incidence Angle Dependence of HH-Polarized C- and L-Band Wintertime Backscatter Over Arctic Sea Ice. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6686-6698.	6.3	43
22	Landfast Sea Ice Conditions in the Canadian Arctic: 1983 â€“ 2009. Arctic, 2012, 65, .	0.4	43
23	Changing sea ice melt parameters in the Canadian Arctic Archipelago: Implications for the future presence of multiyear ice. Journal of Geophysical Research, 2008, 113, .	3.3	38
24	Multiâ€year seaâ€ice conditions in the western Canadian arctic archipelago region of the northwest passage: 1968â€“2006. Atmosphere - Ocean, 2008, 46, 229-242.	1.6	38
25	Landfast ice thickness in the Canadian Arctic Archipelago from observations and models. Cryosphere, 2016, 10, 1463-1475.	3.9	38
26	Assessment of the High Resolution SAR Mode of the RADARSAT Constellation Mission for First Year Ice and Multiyear Ice Characterization. Remote Sensing, 2018, 10, 594.	4.0	36
27	Detection of melt onset over the northern Canadian Arctic Archipelago sea ice from RADARSAT, 1997â€“2014. Remote Sensing of Environment, 2016, 178, 59-69.	11.0	33
28	Evaluation of Operation IceBridge quickâ€look snow depth estimates on sea ice. Geophysical Research Letters, 2015, 42, 9302-9310.	4.0	30
29	Fusing AMSR-E and QuikSCAT Imagery for Improved Sea Ice Recognition. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 1980-1989.	6.3	29
30	Comparing L- and C-band synthetic aperture radar estimates of sea ice motion over different ice regimes. Remote Sensing of Environment, 2018, 204, 380-391.	11.0	29
31	Local-scale variability of snow density on Arctic sea ice. Cryosphere, 2020, 14, 4323-4339.	3.9	28
32	Canadian snow and sea ice: assessment of snow, sea ice, and related climate processes in Canada's Earth system model and climate-prediction system. Cryosphere, 2018, 12, 1137-1156.	3.9	27
33	Headline Indicators for Global Climate Monitoring. Bulletin of the American Meteorological Society, 2021, 102, E20-E37.	3.3	27
34	Improving Sea Ice Characterization in Dry Ice Winter Conditions Using Polarimetric Parameters from C- and L-Band SAR Data. Remote Sensing, 2017, 9, 1270.	4.0	25
35	Origins and Levels of Seasonal Forecast Skill for Sea Ice in Hudson Bay Using Canonical Correlation Analysis. Journal of Climate, 2011, 24, 1378-1395.	3.2	22
36	Recent changes in sea ice area flux through the Beaufort Sea during the summer. Journal of Geophysical Research: Oceans, 2016, 121, 2659-2672.	2.6	22

#	Article	IF	Citations
37	Long-Range Prediction of the Shipping Season in Hudson Bay: A Statistical Approach. Weather and Forecasting, 2007, 22, 1063-1075.	1.4	19
38	Navigating pressured ice: Risks and hazards for winter resource-based shipping in the Canadian Arctic. Ocean and Coastal Management, 2017, 137, 57-67.	4.4	19
39	The Dynamic Response of Sea Ice to Warming in the Canadian Arctic Archipelago. Geophysical Research Letters, 2019, 46, 13119-13125.	4.0	19
40	Sea-Ice Motion and Flux within the Prince Gustaf Adolf Sea, Queen Elizabeth Islands, Canada during 2010. Atmosphere - Ocean, 2013, 51, 1-17.	1.6	18
41	Semi-Automated Classification of Lake Ice Cover Using Dual Polarization RADARSAT-2 Imagery. Remote Sensing, 2018, 10, 1727.	4.0	18
42	Estimating melt onset over Arctic sea ice from time series multi-sensor Sentinel-1 and RADARSAT-2 backscatter. Remote Sensing of Environment, 2019, 229, 48-59.	11.0	18
43	Winter Sentinelâ€1 Backscatter as a Predictor of Spring Arctic Sea Ice Melt Pond Fraction. Geophysical Research Letters, 2017, 44, 12,262.	4.0	17
44	Estimating lake ice thickness in Central Ontario. PLoS ONE, 2018, 13, e0208519.	2.5	17
45	Extreme low sea ice years in the Canadian Arctic Archipelago: 1998 versus 2007. Journal of Geophysical Research, 2010, 115, .	3.3	15
46	Multiyear ice replenishment in the <scp>C</scp>anadian <scp>A</scp>rctic <scp>A</scp>rchipelago: 1997â€“2013. Journal of Geophysical Research: Oceans, 2015, 120, 1623-1637.	2.6	15
47	Recent extreme light sea ice years in the Canadian Arctic Archipelago: 2011 and 2012 eclipse 1998 and 2007. Cryosphere, 2013, 7, 1753-1768.	3.9	14
48	Evaluating RADARSAT-2 for the Monitoring of Lake Ice Phenology Events in Mid-Latitudes. Remote Sensing, 2018, 10, 1641.	4.0	14
49	Estimation of Level and Deformed First-Year Sea Ice Surface Roughness in the Canadian Arctic Archipelago from C- and L-Band Synthetic Aperture Radar. Canadian Journal of Remote Sensing, 2019, 45, 457-475.	2.4	13
50	Constraining Reanalysis Snowfall Over the Arctic Ocean Using CloudSat Observations. Geophysical Research Letters, 2020, 47, e2019GL086426.	4.0	13
51	Snow Thickness Estimation on First-Year Sea Ice from Late Winter Spaceborne Scatterometer Backscatter Variance. Remote Sensing, 2019, 11, 417.	4.0	12
52	Seasonal evolution of L-band SAR backscatter over landfast Arctic sea ice. Remote Sensing of Environment, 2020, 251, 112049.	11.0	11
53	Long-Term Analysis of Sea Ice Drift in the Western Ross Sea, Antarctica, at High and Low Spatial Resolution. Remote Sensing, 2020, 12, 1402.	4.0	11
54	A New Structure for the Sea Ice Essential Climate Variables of the Global Climate Observing System. Bulletin of the American Meteorological Society, 2022, 103, E1502-E1521.	3.3	10

#	Article	IF	Citations
55	Increasing Multiyear Sea Ice Loss in the Beaufort Sea: A New Export Pathway for the Diminishing Multiyear Ice Cover of the Arctic Ocean. Geophysical Research Letters, 2022, 49, .	4.0	10
56	Optimal Compact Polarimetric Parameters and Texture Features for Discriminating Sea Ice Types during Winter and Advanced Melt. Canadian Journal of Remote Sensing, 2018, 44, 390-411.	2.4	9
57	Sensitivity of Ice Drift to Form Drag and Ice Strength Parameterization in a Coupled Iceâ€“Ocean Model. Atmosphere - Ocean, 2019, 57, 329-349.	1.6	9
58	First Observations of a Transient Polynya in the Last Ice Area North of Ellesmere Island. Geophysical Research Letters, 2021, 48, e2021GL095099.	4.0	8
59	Correction to â€œTrends and variability in summer sea ice cover in the Canadian Arctic based on the Canadian Ice Service Digital Archive, 1960â€“2008 and 1968â€“2008â€• Journal of Geophysical Research, 2011, 116, .	3.3	7
60	What historical landfast ice observations tell us about projected ice conditions in Arctic archipelagoes and marginal seas under anthropogenic forcing. Cryosphere, 2018, 12, 3577-3588.	3.9	7
61	Generating large-scale sea ice motion from Sentinel-1 and the RADARSAT Constellation Mission using the Environment and Climate Change Canada automated sea ice tracking system. Cryosphere, 2022, 16, 1125-1139.	3.9	7
62	Linking Regional Winter Sea Ice Thickness and Surface Roughness to Spring Melt Pond Fraction on Landfast Arctic Sea Ice. Remote Sensing, 2018, 10, 37.	4.0	6
63	Using RADARSAT to Identify Sea Ice Ridges and their Implications for Shipping in Canadaâ€™s Hudson Strait. Arctic, 2016, 69, 421.	0.4	6
64	Spring melt pond fraction in the Canadian Arctic Archipelago predicted from RADARSAT-2. Cryosphere, 2020, 14, 4675-4686.	3.9	4
65	Snow Depth on Sea Ice and on Land in the Canadian Arctic from Long-Term Observations. Atmosphere - Ocean, 2023, 61, 217-233.	1.6	4
66	C- and L-band SAR signatures of Arctic sea ice during freeze-up. Remote Sensing of Environment, 2022, 279, 113129.	11.0	4
67	Sea Ice Dynamics in Hudson Strait and its Impact on Winter Shipping Operations.. Journal of Geophysical Research: Oceans, 0, , .	2.6	2
68	Representation of sea ice regimes in the Western Ross Sea, Antarctica, based on satellite imagery and AMPS wind data. Climate Dynamics, 2023, 60, 227-238.	3.8	1
69	Year-Around C- and L- Band Observation Around the Mosaic Ice Floe with High Spatial and Temporal Resolution. , 2021, , .		0