Andrew F Thompson

List of Publications by Year
in descending order

90 papers	4,434 citations	94433 37 h-index	114465 63 g-index
93 all docs	93 docs citations	93 times ranked	4052 citing authors

#	Article	IF	Citations
1	Mixing in the Southern Ocean. , 2022, , 301-327.		6
2	Indo-Pacific Warming Induced by a Weakening of the Atlantic Meridional Overturning Circulation. Journal of Climate, 2022, 35, 815-832.	3.2	12
3	Bathymetric Control of Subpolar Gyres and the Overturning Circulation in the Southern Ocean. Journal of Physical Oceanography, 2022, 52, 205-223.	1.7	8
4	Separating Energetic Internal Gravity Waves and Smallâ€Scale Frontal Dynamics. Geophysical Research Letters, 2022, 49, .	4.0	6
5	How Does Antarctic Bottom Water Cross the Southern Ocean?. Geophysical Research Letters, 2022, 49, .	4.0	28
6	The Dailyâ€Resolved Southern Ocean Mixed Layer: Regional Contrasts Assessed Using Glider Observations. Journal of Geophysical Research: Oceans, 2022, 127, .	2.6	7
7	Heavy footprints of upper-ocean eddies on weakened Arctic sea ice inâ€‰marginal ice zones. Nature Communications, 2022, 13, 2147.	12.8	14
8	Enhanced Ventilation in Energetic Regions of the Antarctic Circumpolar Current. Geophysical Research Letters, 2022, 49, .	4.0	9
9	A pole-to-equator ocean overturning circulation on Enceladus. Nature Geoscience, 2021, 14, 185-189.	12.9	29
10	Stirring of Seaâ€Ice Meltwater Enhances Submesoscale Fronts in the Southern Ocean. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016814.	2.6	19
11	The Evolution and Arrest of a Turbulent Stratified Oceanic Bottom Boundary Layer over a Slope: Upslope Regime and PV Dynamics. Journal of Physical Oceanography, 2021, 51, 1077-1089.	1.7	7
12	The Shelf Circulation of the Bellingshausen Sea. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016871.	2.6	9
13	Iceâ€Shelf Meltwater Overturning in the Bellingshausen Sea. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016957.	2.6	6
14	Observational Evidence of Ventilation Hotspots in the Southern Ocean. Journal of Geophysical Research: Oceans, 2021, 126, e2021JC017178.	2.6	15
15	Exploration of Icy Ocean Worlds Using Geophysical Approaches. Planetary Science Journal, 2021, 2, 150.	3.6	14
16	A hemispheric asymmetry in poleward ocean heat transport across climates: Implications for overturning and polar warming. Earth and Planetary Science Letters, 2021, 568, 117033.	4.4	3
17	Resolvent analysis of stratification effects on wall-bounded shear flows. Physical Review Fluids, 2021, 6, .	2.5	7
18	The Antarctic Coastal Current in the Bellingshausen Sea. Cryosphere, 2021, 15, 4179-4199.	3.9	10

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19	The Vertical Structure of Open-Ocean Submesoscale Variability during a Full Seasonal Cycle. Journal of Physical Oceanography, 2020, 50, 145-160.	1.7	22
20	Enhanced upward heat transport at deep submesoscale ocean fronts. Nature Geoscience, 2020, 13, 50-55.	12.9	84
21	Genesis of the Antarctic Slope Current in West Antarctica. Geophysical Research Letters, 2020, 47, e2020GL087802.	4.0	28
22	Centennial Changes in the Indonesian Throughflow Connected to the Atlantic Meridional Overturning Circulation: The Ocean's Transient Conveyor Belt. Geophysical Research Letters, 2020, 47, e2020GL090615.	4.0	13
23	Altimetry-Based Diagnosis of Deep-Reaching Sub-Mesoscale Ocean Fronts. Fluids, 2020, 5, 145.	1.7	9
24	Highâ€Frequency Submesoscale Motions Enhance the Upward Vertical Heat Transport in the Global Ocean. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016544.	2.6	35
25	Submesoscale Fronts in the Antarctic Marginal Ice Zone and Their Response to Wind Forcing. Geophysical Research Letters, 2020, 47, e2019GL086649.	4.0	22
26	Enhanced eddy activity in the Beaufort Gyre in response to sea ice loss. Nature Communications, 2020, 11, 761.	12.8	65
27	Transient Overturning Compensation between Atlantic and Indo-Pacific Basins. Journal of Physical Oceanography, 2020, 50, 2151-2172.	1.7	18
28	Global Estimates of the Energy Transfer From the Wind to the Ocean, With Emphasis on Nearâ€Inertial Oscillations. Journal of Geophysical Research: Oceans, 2019, 124, 5723-5746.	2.6	36
29	Constraining Southern Ocean Air-Sea-Ice Fluxes Through Enhanced Observations. Frontiers in Marine Science, 2019, 6, .	2.5	31
30	Phytoplankton spring bloom initiation: The impact of atmospheric forcing and light in the temperate North Atlantic Ocean. Progress in Oceanography, 2019, 178, 102202.	3.2	40
31	Remote Sensing of Chlorophyll Fluorescence in the Ocean Using Imaging Spectrometry: Toward a Vertical Profile of Fluorescence. Geophysical Research Letters, 2019, 46, 1571-1579.	4.0	11
32	A Southern Ocean Mechanism for the Interhemispheric Coupling and Phasing of the Bipolar Seesaw. Journal of Climate, 2019, 32, 4347-4365.	3.2	11
33	The Role of the Southern Ocean in Abrupt Transitions and Hysteresis in Glacial Ocean Circulation. Paleoceanography and Paleoclimatology, 2019, 34, 490-510.	2.9	7
34	Southern Ocean Seasonal Restratification Delayed by Submesoscale Windâ€"Front Interactions. Journal of Physical Oceanography, 2019, 49, 1035-1053.	1.7	48
35	Atlantic Ocean Heat Transport Enabled by Indoâ€Pacific Heat Uptake and Mixing. Geophysical Research Letters, 2019, 46, 13939-13949.	4.0	16
36	The Evolution and Arrest of a Turbulent Stratified Oceanic Bottom Boundary Layer over a Slope: Downslope Regime. Journal of Physical Oceanography, 2019, 49, 469-487.	1.7	14

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37	Ocean submesoscales as a key component of the global heat budget. Nature Communications, 2018, 9, 775.	12.8	255
38	Dynamic Topography and Sea Level Anomalies of the Southern Ocean: Variability and Teleconnections. Journal of Geophysical Research: Oceans, 2018, 123, 613-630.	2.6	85
39	The Antarctic Slope Current in a Changing Climate. Reviews of Geophysics, 2018, 56, 741-770.	23.0	180
40	Reassessing the Role of the Indoâ€Pacific in the Ocean's Global Overturning Circulation. Geophysical Research Letters, 2018, 45, 12,422.	4.0	21
41	The Seasonality of Physically Driven Export at Submesoscales in the Northeast Atlantic Ocean. Global Biogeochemical Cycles, 2018, 32, 1144-1162.	4.9	32
42	Abrupt Transitions in Submesoscale Structure in Southern Drake Passage: Glider Observations and Model Results. Journal of Physical Oceanography, 2018, 48, 2011-2027.	1.7	47
43	Eddy Memory Mode of Multidecadal Variability in Residual-Mean Ocean Circulations with Application to the Beaufort Gyre. Journal of Physical Oceanography, 2017, 47, 855-866.	1.7	28
44	ACC Meanders, Energy Transfer, and Mixed Barotropicâ€“Baroclinic Instability. Journal of Physical Oceanography, 2017, 47, 1291-1305.	1.7	48
45	Variability of the Antarctic Slope Current System in the Northwestern Weddell Sea. Journal of Physical Oceanography, 2017, 47, 2977-2997.	1.7	27
46	Contribution of topographically generated submesoscale turbulence to Southern Ocean overturning. Nature Geoscience, 2017, 10, 840-845.	12.9	42
47	Submesoscale Sea Iceâ€Ocean Interactions in Marginal Ice Zones. Journal of Geophysical Research: Oceans, 2017, 122, 9455-9475.	2.6	81
48	The influence of meridional ice transport on Europa's ocean stratification and heat content. Geophysical Research Letters, 2017, 44, 5969-5977.	4.0	26
49	Testing Munk's hypothesis for submesoscale eddy generation using observations in the North Atlantic. Journal of Geophysical Research: Oceans, 2017, 122, 6725-6745.	2.6	22
50	The vertical structure of upper ocean variability at the Porcupine Abyssal Plain during 2012â€“2013. Journal of Geophysical Research: Oceans, 2016, 121, 3075-3089.	2.6	32
51	Ocean Convective Available Potential Energy. Part I: Concept and Calculation. Journal of Physical Oceanography, 2016, 46, 1081-1096.	1.7	16
52	Ocean Convective Available Potential Energy. Part II: Energetics of Thermobaric Convection and Thermobaric Cabbeling. Journal of Physical Oceanography, 2016, 46, 1097-1115.	1.7	17
53	Circulation and meltwater distribution in the Bellingshausen Sea: From shelf break to coast. Geophysical Research Letters, 2016, 43, 6402-6409.	4.0	40
54	A Multibasin Residual-Mean Model for the Global Overturning Circulation. Journal of Physical Oceanography, 2016, 46, 2583-2604.	1.7	42

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55	An advective mechanism for deep chlorophyll maxima formation in southern Drake Passage. Geophysical Research Letters, 2016, 43, 10,846.	4.0	22
56	Lagrangian pathways of upwelling in the Southern Ocean. Journal of Geophysical Research: Oceans, 2016, 121, 6295-6309.	2.6	20
57	Bottom Boundary Potential Vorticity Injection from an Oscillating Flow: A PV Pump. Journal of Physical Oceanography, 2016, 46, 3509-3526.	1.7	7
58	Eddy Generation and Jet Formation via Dense Water Outflows across the Antarctic Continental Slope. Journal of Physical Oceanography, 2016, 46, 3729-3750.	1.7	42
59	A Theory of the Wind-Driven Beaufort Gyre Variability. Journal of Physical Oceanography, 2016, 46, 3263-3278.	1.7	44
60	Seasonality of submesoscale flows in the ocean surface boundary layer. Geophysical Research Letters, 2016, 43, 2118-2126.	4.0	104
61	Open-Ocean Submesoscale Motions: A Full Seasonal Cycle of Mixed Layer Instabilities from Gliders. Journal of Physical Oceanography, 2016, 46, 1285-1307.	1.7	155
62	Marine ice-sheet profiles and stability under Coulomb basal conditions. Journal of Glaciology, 2015, 61, 205-215.	2.2	117
63	Estimating Oceanic Primary Production Using Vertical Irradiance and Chlorophyll Profiles from Ocean Gliders in the North Atlantic. Environmental Science & Technology, 2015, 49, 11612-11621.	10.0	46
64	The glacial midâ€depth radiocarbon bulge and its implications for the overturning circulation. Paleoceanography, 2015, 30, 1021-1039.	3.0	61
65	Weddell Sea Export Pathways from Surface Drifters. Journal of Physical Oceanography, 2015, 45, 1068-1085.	1.7	23
66	Eddyâ€mediated transport of warm Circumpolar Deep Water across the Antarctic Shelf Break. Geophysical Research Letters, 2015, 42, 432-440.	4.0	168
67	Multidecadal warming of Antarctic waters. Science, 2014, 346, 1227-1231.	12.6	346
68	Antarctic sea ice control on ocean circulation in present and glacial climates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8753-8758.	7.1	295
69	Eddy transport as a key component of the Antarctic overturning circulation. Nature Geoscience, 2014, 7, 879-884.	12.9	93
70	On the Importance of Surface Forcing in Conceptual Models of the Deep Ocean. Journal of Physical Oceanography, 2014, 44, 891-899.	1.7	21
71	An Idealized Model of Weddell Gyre Export Variability. Journal of Physical Oceanography, 2014, 44, 1671-1688.	1.7	52
72	Equilibration of the Antarctic Circumpolar Current by Standing Meanders. Journal of Physical Oceanography, 2014, 44, 1811-1828.	1.7	103

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73	Ocean processes at the Antarctic continental slope. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130047.	3.4	45
74	Connecting Antarctic Cross-Slope Exchange with Southern Ocean Overturning. Journal of Physical Oceanography, 2013, 43, 1453-1471.	1.7	69
75	Surface exchange between the Weddell and Scotia Seas. Geophysical Research Letters, 2013, 40, 5920-5925.	4.0	22
76	Sensitivity of the ocean's deep overturning circulation to easterly Antarctic winds. Geophysical Research Letters, 2012, 39, .	4.0	38
77	Jets and Topography: Jet Transitions and the Impact on Transport in the Antarctic Circumpolar Current. Journal of Physical Oceanography, 2012, 42, 956-972.	1.7	129
78	The Formation of Nonzonal Jets over Sloped Topography. Journal of Physical Oceanography, 2012, 42, 1635-1651.	1.7	23
79	Low frequency variability of Southern Ocean jets. Journal of Geophysical Research, 2011, 116, .	3.3	32
80	The impact of highâ€frequency current variability on dispersion off the eastern Antarctic Peninsula. Journal of Geophysical Research, 2011, 116, .	3.3	2
81	Rapid Southern Ocean front transitions in an eddyâ€resolving ocean GCM. Geophysical Research Letters, 2010, 37, .	4.0	40
82	Jet Formation and Evolution in Baroclinic Turbulence with Simple Topography. Journal of Physical Oceanography, 2010, 40, 257-278.	1.7	77
83	Surface Circulation at the Tip of the Antarctic Peninsula from Drifters. Journal of Physical Oceanography, 2009, 39, 3-26.	1.7	110
84	Ocean circulation. Geophysical Monograph Series, 2009, , 99-118.	0.1	4
85	Frontal structure and transport in the northwestern Weddell Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2008, 55, 1229-1251.	1.4	64
86	The atmospheric ocean: eddies and jets in the Antarctic Circumpolar Current. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 4529-4541.	3.4	50
87	Two-Layer Baroclinic Eddy Heat Fluxes: Zonal Flows and Energy Balance. Journals of the Atmospheric Sciences, 2007, 64, 3214-3231.	1.7	88
88	Spatial and Temporal Patterns of Small-Scale Mixing in Drake Passage. Journal of Physical Oceanography, 2007, 37, 572-592.	1.7	59
89	Scaling Baroclinic Eddy Fluxes: Vortices and Energy Balance. Journal of Physical Oceanography, 2006, 36, 720-738.	1.7	84
90	Solidification and compositional convection of a ternary alloy. Journal of Fluid Mechanics, 2003, 497, 167-199.	3.4	19