Baylor Fox-Kemper

List of Publications by Year
in descending order

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105	7,003	71004	71088
papers	citations	43 h-index	80 g-index

131	131	131	6970
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ocean near-surface layers. , 2022, , 65-94.		5
2	Evaluating Coupled Climate Model Parameterizations via Skill at Reproducing the Monsoon Intraseasonal Oscillation. Journal of Climate, 2022, 35, 1873-1884.	1.2	2
3	The small scales of the ocean may hold the key to surprises. Nature Climate Change, 2022, 12, 496-499.	8.1	26
4	Effects of symmetric instability in the Kuroshio Extension region in winter. Deep-Sea Research Part II: Topical Studies in Oceanography, 2022, 202, 105142.	0.6	1
5	Submesoscale Fronts and Their Dynamical Processes Associated with Symmetric Instability in the Northwest Pacific Subtropical Ocean. Journal of Physical Oceanography, 2021, 51, 83-100.	0.7	37
6	Application of Symmetric Instability Parameterization in the Coastal and Regional Ocean Community Model (CROCO). Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002302.	1.3	12
7	Submesoscale Eddies in the Upper Ocean of the Kuroshio Extension from High-resolution Simulation: Energy Budget. Journal of Physical Oceanography, 2021, , .	0.7	17
8	Advective structure functions in anisotropic two-dimensional turbulence. Journal of Fluid Mechanics, 2021, 916, .	1.4	2
9	The Scale and Activity of Symmetric Instability Estimated from a Global Submesoscale-Permitting Ocean Model. Journal of Physical Oceanography, 2021, 51, 1655-1670.	0.7	24
10	Consistent Predictability of the Ocean State Ocean Model Using Information Theory and Flushing Timescales. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016875.	1.0	2
11	Nonequilibrium Oscillations, Probability Angular Momentum, and the Climate System. Journal of Statistical Physics, 2020, 179, 1010-1027.	0.5	13
12	Autoregressive Statistical Modeling of a Peru Margin Multi-proxy Holocene Record Shows Correlation Not Causation, Flickering Regimes and Persistence. Journal of Statistical Physics, 2020, 179, 1553-1571.	0.5	1
13	Resolving and Parameterising the Ocean Mesoscale in Earth System Models. Current Climate Change Reports, 2020, 6, 137-152.	2.8	62
14	A Breakdown in Potential Vorticity Estimation Delineates the Submesoscaleâ€toâ€Turbulence Boundary in Large Eddy Simulations. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002049.	1.3	12
15	Reduced-Order Quasilinear Model of Ocean Boundary-Layer Turbulence. Journal of Physical Oceanography, 2020, 50, 537-558.	0.7	6
16	Advances in Observing and Understanding Small-Scale Open Ocean Circulation During the Gulf of Mexico Research Initiative Era. Frontiers in Marine Science, 2020, 7, .	1.2	16
17	Data-driven versus self-similar parameterizations for stochastic advection by Lie transport and location uncertainty. Nonlinear Processes in Geophysics, 2020, 27, 209-234.	0.6	14
18	The Community Earth System Model Version 2 (CESM2). Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001916.	1.3	935

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19	The Seasonality of Submesoscale Energy Production, Content, and Cascade. Geophysical Research Letters, 2020, 47, e2020GL087388.	1.5	51
20	The physical oceanography of the transport of floating marine debris. Environmental Research Letters, 2020, 15, 023003.	2.2	469
21	Saildrone: Adaptively Sampling the Marine Environment. Bulletin of the American Meteorological Society, 2020, 101, E744-E762.	1.7	38
22	A Diagnosis of Anisotropic Eddy Diffusion From a Highâ€Resolution Global Ocean Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001904.	1.3	28
23	The impact of a parameterisation of submesoscale mixed layer eddies on mixed layer depths in the NEMO ocean model. Ocean Modelling, 2020, 154, 101678.	1.0	7
24	Biases in Structure Functions from Observations of Submesoscale Flows. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015769.	1.0	10
25	Anisotropy of Langmuir turbulence and the Langmuir-enhanced mixed layer entrainment. Physical Review Fluids, 2020, 5, .	1.0	8
26	The Scale of Submesoscale Baroclinic Instability Globally. Journal of Physical Oceanography, 2020, 50, 2649-2667.	0.7	39
27	Evaluation of global oceanâ€“sea-ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2 (OMIP-2). Geoscientific Model Development, 2020, 13, 3643-3708.	1.3	99
28	Impact of horizontal resolution on global oceanâ€“sea ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2 (OMIP-2). Geoscientific Model Development, 2020, 13, 4595-4637.	1.3	75
29	Data Availability Principles and Practice. Journal of Physical Oceanography, 2020, 50, 3377-3378.	0.7	1
30	SEASTAR: A Mission to Study Ocean Submesoscale Dynamics and Small-Scale Atmosphere-Ocean Processes in Coastal, Shelf and Polar Seas. Frontiers in Marine Science, 2019, 6, .	1.2	37
31	Small-Scale Dispersion in the Presence of Langmuir Circulation. Journal of Physical Oceanography, 2019, 49, 3069-3085.	0.7	19
32	Comparing Ocean Surface Boundary Vertical Mixing Schemes Including Langmuir Turbulence. Journal of Advances in Modeling Earth Systems, 2019, 11, 3545-3592.	1.3	62
33	The Response of East Asian Monsoon to the Precessional Cycle: A New Study Using the Geophysical Fluid Dynamics Laboratory Model. Geophysical Research Letters, 2019, 46, 11388-11396.	1.5	11
34	Ocean Climate Observing Requirements in Support of Climate Research and Climate Information. Frontiers in Marine Science, 2019, 6, .	1.2	12
35	Integrated Observations of Global Surface Winds, Currents, and Waves: Requirements and Challenges for the Next Decade. Frontiers in Marine Science, 2019, 6, .	1.2	60
36	Challenges and Prospects in Ocean Circulation Models. Frontiers in Marine Science, 2019, 6, .	1.2	133

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37	Impacts of Convergence on Structure Functions from Surface Drifters in the Gulf of Mexico. Journal of Physical Oceanography, 2019, 49, 675-690.	0.7	31
38	Can we use sea surface temperature and productivity proxy records to reconstruct Ekman upwelling?. Climate of the Past, 2019, 15, 1985-1998.	1.3	2
39	Estimating the sea ice floe size distribution using satellite altimetry: theory, climatology, and model comparison. Cryosphere, 2019, 13, 2869-2885.	1.5	23
40	Scale Transition From Geostrophic Motions to Internal Waves in the Northern South China Sea. Journal of Geophysical Research: Oceans, 2019, 124, 9364-9383.	1.0	25
41	Log-Normal Turbulence Dissipation in Global Ocean Models. Physical Review Letters, 2018, 120, 094501.	2.9	47
42	Effects of Langmuir Turbulence on Upper Ocean Carbonate Chemistry. Journal of Advances in Modeling Earth Systems, 2018, 10, 3030-3048.	1.3	9
43	Surface Ocean Dispersion Observations From the Ship-Tethered Aerostat Remote Sensing System. Frontiers in Marine Science, 2018, 5, .	1.2	15
44	The Growth and Saturation of Submesoscale Instabilities in the Presence of a Barotropic Jet. Journal of Physical Oceanography, 2018, 48, 2779-2797.	0.7	6
45	Precession-band variance missing from East Asian monsoon runoff. Nature Communications, 2018, 9, 3364.	5.8	112
46	Hemispheric sea ice distribution sets the glacial tempo. Geophysical Research Letters, 2017, 44, 1008-1014.	1.5	9
47	A scale-aware subgrid model for quasi-geostrophic turbulence. Journal of Geophysical Research: Oceans, 2017, 122, 1529-1554.	1.0	50
48	Evaluation of scale-aware subgrid mesoscale eddy models in a global eddy-rich model. Ocean Modelling, 2017, 115, 42-58.	1.0	53
49	Statistical models of global Langmuir mixing. Ocean Modelling, 2017, 113, 95-114.	1.0	39
50	Parameterization of Frontal Symmetric Instabilities. I: Theory for Resolved Fronts. Ocean Modelling, 2017, 109, 72-95.	1.0	84
51	Assessing the Effects of Langmuir Turbulence on the Entrainment Buoyancy Flux in the Ocean Surface Boundary Layer. Journal of Physical Oceanography, 2017, 47, 2863-2886.	0.7	71
52	Numerical modelling in a multiscale ocean. Journal of Marine Research, 2017, 75, 683-725.	0.3	5
53	Ocean dynamics. Journal of Marine Research, 2017, 75, 641-682.	0.3	0
54	OMIP contribution to CMIP6: experimental and diagnostic protocol for the physical component of the Ocean Model Intercomparison Project. Geoscientific Model Development, 2016, 9, 3231-3296.	1.3	223

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55	Manifest and Subtle Cyclic Behavior in Nonequilibrium Steady States. Journal of Physics: Conference Series, 2016, 750, 012003.	0.3	5
56	Understanding Stokes forces in the waveâ€averaged equations. Journal of Geophysical Research: Oceans, 2016, 121, 3579-3596.	1.0	77
57	Seasonal thermal fronts on the northern South China Sea shelf: Satellite measurements and three repeated field surveys. Journal of Geophysical Research: Oceans, 2016, 121, 1914-1930.	1.0	31
58	The role of mixed-layer instabilities in submesoscale turbulence. Journal of Fluid Mechanics, 2016, 788, 5-41.	1.4	107
59	Rapid variations in deep ocean temperature detected in the Holocene. Geophysical Research Letters, 2016, 43, 12,190.	1.5	1
60	Effects of submesoscale turbulence on ocean tracers. Journal of Geophysical Research: Oceans, 2016, 121, 908-933.	1.0	70
61	Surface waves affect frontogenesis. Journal of Geophysical Research: Oceans, 2016, 121, 3597-3624.	1.0	49
62	Langmuir mixing effects on global climate: WAVEWATCH III in CESM. Ocean Modelling, 2016, 103, 145-160.	1.0	91
63	Symmetric and Geostrophic Instabilities in the Wave-Forced Ocean Mixed Layer. Journal of Physical Oceanography, 2015, 45, 3033-3056.	0.7	51
64	A tracer-based inversion method for diagnosing eddy-induced diffusivity and advection. Ocean Modelling, 2015, 86, 1-14.	1.0	37
65	Impacts of wave spreading and multidirectional waves on estimating Stokes drift. Ocean Modelling, 2015, 96, 49-64.	1.0	50
66	Characterization of turbulence anisotropy, coherence, and intermittency at a prospective tidal energy site: Observational data analysis. Renewable Energy, 2015, 76, 441-453.	4.3	49
67	Estimates of Ocean Macroturbulence: Structure Function and Spectral Slope from Argo Profiling Floats. Journal of Physical Oceanography, 2015, 45, 1773-1793.	0.7	20
68	Quantifying upper ocean turbulence driven by surface waves. Geophysical Research Letters, 2014, 41, 102-107.	1.5	98
69	Adaptive wavelet collocation method on the shallow water model. Journal of Computational Physics, 2014, 271, 342-359.	1.9	10
70	Computing Ocean Surface Currents Over the Coastal California Current System Using 30-Min-Lag Sequential SAR Images. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 7559-7580.	2.7	50
71	Langmuirâ€“Submesoscale Interactions: Descriptive Analysis of Multiscale Frontal Spindown Simulations. Journal of Physical Oceanography, 2014, 44, 2249-2272.	0.7	105
72	Oceanic wave-balanced surface fronts and filaments. Journal of Fluid Mechanics, 2013, 730, 464-490.	1.4	55

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73	Eddy parameterization challenge suite I: Eady spindown. Ocean Modelling, 2013, 64, 12-28.	1.0	59
74	Generalized linear modeling of the El NiÃ±o/Southern Oscillation with application to seasonal forecasting and climate change projections. Journal of Geophysical Research: Oceans, 2013, 118, 3764-3781.	1.0	2
75	Quantifying errors in coral-based ENSO estimates: Toward improved forward modeling ofÎ´¹⁸O. Paleoceanography, 2013, 28, 633-649.	3.0	21
76	Lateral Transport in the Ocean Interior. International Geophysics, 2013, , 185-209.	0.6	17
77	Will There Be a Significant Change to El NiÃ±o in the Twenty-First Century?. Journal of Climate, 2012, 25, 2129-2145.	1.2	129
78	Understanding the ENSOâ€“CO2 Link Using Stabilized Climate Simulations. Journal of Climate, 2012, 25, 7917-7936.	1.2	14
79	Hurricane wake restratification rates of one-, two- and three-dimensional processes. Journal of Marine Research, 2012, 70, 824-850.	0.3	20
80	Wind Waves in the Coupled Climate System. Bulletin of the American Meteorological Society, 2012, 93, 1651-1661.	1.7	184
81	A global perspective on Langmuir turbulence in the ocean surface boundary layer. Geophysical Research Letters, 2012, 39, .	1.5	238
82	The influence of ENSO on global terrestrial water storage using GRACE. Geophysical Research Letters, 2012, 39, .	1.5	95
83	Mean Biases, Variability, and Trends in Airâ€“Sea Fluxes and Sea Surface Temperature in the CCSM4. Journal of Climate, 2012, 25, 7781-7801.	1.2	23
84	The form and orientation of Langmuir cells for misaligned winds and waves. Journal of Geophysical Research, 2012, 117, .	3.3	105
85	Multiscale simulations of Langmuir cells and submesoscale eddies using XSEDE resources. , 2012, , .		4
86	Adaptive volume penalization for ocean modeling. Ocean Dynamics, 2012, 62, 1201-1215.	0.9	17
87	On the interactions between planetary geostrophy and mesoscale eddies. Dynamics of Atmospheres and Oceans, 2011, 51, 109-136.	0.7	21
88	Parameterization of mixed layer eddies. III: Implementation and impact in global ocean climate simulations. Ocean Modelling, 2011, 39, 61-78.	1.0	269
89	Wave spectral moments and Stokes drift estimation. Ocean Modelling, 2011, 40, 273-288.	1.0	88
90	ENSO Model Validation Using Wavelet Probability Analysis. Journal of Climate, 2010, 23, 5540-5547.	1.2	54

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91	Problems and Prospects in Large-Scale Ocean Circulation Models. , 2010, , .		18
92	An Eddifying Parsons Model. Journal of Physical Oceanography, 2009, 39, 3216-3227.	0.7	5
93	Differences in the Indonesian seaway in a coupled climate model and their relevance to Pliocene climate and El NiÃ±o. Paleoceanography, 2009, 24, .	3.0	48
94	Can large eddy simulation techniques improve mesoscale rich ocean models?. Geophysical Monograph Series, 2008, , 319-337.	0.1	84
95	Parameterization of Mixed Layer Eddies. Part I: Theory and Diagnosis. Journal of Physical Oceanography, 2008, 38, 1145-1165.	0.7	567
96	Parameterization of Mixed Layer Eddies. Part II: Prognosis and Impact. Journal of Physical Oceanography, 2008, 38, 1166-1179.	0.7	119
97	Mixed Layer Instabilities and Restratification. Journal of Physical Oceanography, 2007, 37, 2228-2250.	0.7	521
98	Reevaluating the Roles of Eddies in Multiple Barotropic Wind-Driven Gyres. Journal of Physical Oceanography, 2005, 35, 1263-1278.	0.7	15
99	Wind-driven barotropic gyre II: Effects of eddies and low interior viscosity. Journal of Marine Research, 2004, 62, 195-232.	0.3	12
100	Wind-driven barotropic gyre I: Circulation control by eddy vorticity fluxes to an enhanced removal region. Journal of Marine Research, 2004, 62, 169-193.	0.3	29
101	On the Indeterminacy of Rotational and Divergent Eddy Fluxes*. Journal of Physical Oceanography, 2003, 33, 478-483.	0.7	57
102	A perturbation approach to understanding the effects of turbulence on frontogenesis. Journal of Fluid Mechanics, 0, 883, .	1.4	15
103	Biological and Physical Interactions at Local Ocean Scales: Coupled Systems. , 0, , 5-17.		0
104	Notions for the Motions of the Oceans. , 0, , .		6
105	Video: Holi Tracers. , 0, , .		0