Jonathan Gula

List of Publications by Year
in descending order

58 papers	2,365 citations	257101 24 h-index	214527 47 g-index
76 all docs	76 docs citations	76 times ranked	2400 citing authors

#	Article	IF	Citations
1	Seasonality in submesoscale turbulence. Nature Communications, 2015, 6, 6862.	5.8	242
2	Submesoscale Cold Filaments in the Gulf Stream. Journal of Physical Oceanography, 2014, 44, 2617-2643.	0.7	221
3	Topographic generation of submesoscale centrifugal instability and energy dissipation. Nature Communications, 2016, 7, 12811.	5.8	156
4	Gulf Stream Dynamics along the Southeastern U.S. Seaboard. Journal of Physical Oceanography, 2015, 45, 690-715.	0.7	128
5	Smallâ€scale open ocean currents have large effects on wind wave heights. Journal of Geophysical Research: Oceans, 2017, 122, 4500-4517.	1.0	128
6	Filament Frontogenesis by Boundary Layer Turbulence. Journal of Physical Oceanography, 2015, 45, 1988-2005.	0.7	109
7	Dynamical Downscaling over the Great Lakes Basin of North America Using the WRF Regional Climate Model: The Impact of the Great Lakes System on Regional Greenhouse Warming. Journal of Climate, 2012, 25, 7723-7742.	1.2	98
8	Topographic vorticity generation, submesoscale instability and vortex street formation in the Gulf Stream. Geophysical Research Letters, 2015, 42, 4054-4062.	1.5	92
9	Control and Stabilization of the Gulf Stream by Oceanic Current Interaction with the Atmosphere. Journal of Physical Oceanography, 2016, 46, 3439-3453.	0.7	75
10	Submesoscale Dynamics of a Gulf Stream Frontal Eddy in the South Atlantic Bight. Journal of Physical Oceanography, 2016, 46, 305-325.	0.7	64
11	Dampening of Submesoscale Currents by Air-Sea Stress Coupling in the Californian Upwelling System. Scientific Reports, 2018, 8, 13388.	1.6	59
12	Using a coupled lake model with WRF for dynamical downscaling. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7193-7208.	1.2	58
13	Eddyâ€topography interactions and the fate of the <scp>P</scp>ersian <scp>G</scp>ulf <scp>O</scp>utflow. Journal of Geophysical Research: Oceans, 2015, 120, 6700-6717.	1.0	54
14	The Submesoscale Kinetic Energy Cascade: Mesoscale Absorption of Submesoscale Mixed Layer Eddies and Frontal Downscale Fluxes. Journal of Physical Oceanography, 2020, 50, 2573-2589.	0.7	53
15	Prospects for future satellite estimation of small-scale variability of ocean surface velocity and vorticity. Progress in Oceanography, 2019, 173, 256-350.	1.5	51
16	Climate change impacts on Great Lakes Basin precipitation extremes. Journal of Geophysical Research D: Atmospheres, 2014, 119, 10,799-10,812.	1.2	49
17	Dispersion of deep-sea hydrothermal vent effluents and larvae by submesoscale and tidal currents. Deep-Sea Research Part I: Oceanographic Research Papers, 2018, 133, 1-18.	0.6	44
18	Submesoscale Coherent Vortices in the Gulf Stream. Geophysical Research Letters, 2019, 46, 2704-2714.	1.5	41

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19	Technical challenges and solutions in representing lakes when using WRF in downscaling applications. Geoscientific Model Development, 2015, 8, 1085-1096.	1.3	39
20	Submesoscale cyclones in the Agulhas current. Geophysical Research Letters, 2017, 44, 346-354.	1.5	37
21	Effects of the Submesoscale on the Potential Vorticity Budget of Ocean Mode Waters. Journal of Physical Oceanography, 2018, 48, 2141-2165.	0.7	37
22	Submesoscale streamers exchange water on the north wall of the Gulf Stream. Geophysical Research Letters, 2016, 43, 1226-1233.	1.5	33
23	Coastal upwelling south of Madagascar: Temporal and spatial variability. Journal of Marine Systems, 2018, 178, 29-37.	0.9	30
24	Generation of Submesoscale Frontal Eddies in the Agulhas Current. Journal of Geophysical Research: Oceans, 2019, 124, 7606-7625.	1.0	29
25	Ageostrophic instabilities of fronts in a channel in a stratified rotating fluid. Journal of Fluid Mechanics, 2009, 627, 485-507.	1.4	24
26	The Gulf Stream North Wall: Ageostrophic Circulation and Frontogenesis. Journal of Physical Oceanography, 2019, 49, 893-916.	0.7	23
27	Barotropic vorticity balance of the North Atlantic subpolar gyre in an eddy-resolving model. Ocean Science, 2020, 16, 451-468.	1.3	23
28	Instabilities of buoyancy-driven coastal currents and their nonlinear evolution in the two-layer rotating shallow-water model. Part 1. Passive lower layer. Journal of Fluid Mechanics, 2010, 659, 69-93.	1.4	21
29	North Atlantic Barotropic Vorticity Balances in Numerical Models. Journal of Physical Oceanography, 2016, 46, 289-303.	0.7	21
30	The life cycle of submesoscale eddies generated by topographic interactions. Ocean Science, 2019, 15, 1531-1543.	1.3	21
31	The Role of Curvature in Modifying Frontal Instabilities. Part I: Review of Theory and Presentation of a Nondimensional Instability Criterion. Journal of Physical Oceanography, 2021, 51, 299-315.	0.7	21
32	Instabilities of buoyancy-driven coastal currents and their nonlinear evolution in the two-layer rotating shallow water model. Part 2. Active lower layer. Journal of Fluid Mechanics, 2010, 665, 209-237.	1.4	20
33	Oceanic Mesoscale Eddy Depletion Catalyzed by Internal Waves. Geophysical Research Letters, 2021, 48, e2021GL094376.	1.5	19
34	Sea Surface Signature of Internal Tides. Geophysical Research Letters, 2019, 46, 3880-3890.	1.5	17
35	Uncovering a New Current: The Southwest MAdagascar Coastal Current. Geophysical Research Letters, 2018, 45, 1930-1938.	1.5	16
36	Frontal instabilities and waves in a differentially rotating fluid. Journal of Fluid Mechanics, 2011, 685, 532-542.	1.4	15

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37	(A)geostrophic adjustment of dipolar perturbations, formation of coherent structures and their properties, as follows from high-resolution numerical simulations with rotating shallow water model. Physics of Fluids, 2010, 22, .	1.6	14
38	Potential vorticity diagnostics based on balances between volume integral and boundary conditions. Ocean Modelling, 2019, 138, 23-35.	1.0	14
39	Instabilities of two-layer shallow-water flows with vertical shear in the rotating annulus. Journal of Fluid Mechanics, 2009, 638, 27-47.	1.4	13
40	Deep Currents in the Rift Valley of the North Mid-Atlantic Ridge. Frontiers in Marine Science, 2019, 6, .	1.2	13
41	The Role of Curvature in Modifying Frontal Instabilities. Part II: Application of the Criterion to Curved Density Fronts at Low Richardson Numbers. Journal of Physical Oceanography, 2021, 51, 317-341.	0.7	12
42	Interaction of the Gulf Stream with small scale topography: a focus on lee waves. Scientific Reports, 2020, 10, 2332.	1.6	12
43	Observed Equatorward Propagation and Chimney Effect of Nearâ€Inertial Waves in the Midlatitude Ocean. Geophysical Research Letters, 2022, 49, .	1.5	12
44	A Persistent Deep Anticyclonic Vortex in the Rockall Trough Sustained by Anticyclonic Vortices Shed From the Slope Current and Wintertime Convection. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015905.	1.0	10
45	Submesoscale flows impact Agulhas leakage in ocean simulations. Communications Earth & Environment, 2021, 2, .	2.6	9
46	Why Does the Deep Western Boundary Current â€œLeakâ€•around Flemish Cap?. Journal of Physical Oceanography, 2020, 50, 1989-2016.	0.7	9
47	Internal Tide Cycle and Topographic Scattering Over the North Midâ€Atlantic Ridge. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016376.	1.0	8
48	Submesoscale processes and mixing. , 2022, , 181-214.		8
49	Hydrothermal plumes as hotspots for deep-ocean heterotrophic microbial biomass production. Nature Communications, 2021, 12, 6861.	5.8	7
50	Slippery Bottom Boundary Layers: The Loss of Energy From the General Circulation by Bottom Drag. Geophysical Research Letters, 2021, 48, e2021GL094434.	1.5	6
51	Oceanic mesoscale cyclones cluster surface Lagrangian material. Geophysical Research Letters, 0, , .	1.5	6
52	Foresight Workshop on Advances in Ocean Biological Observations: a sustained system for deep-ocean meroplankton. Research Ideas and Outcomes, 0, 6, .	1.0	5
53	The influence of merger and convection on an anticyclonic eddy trapped in a bowl. Ocean Modelling, 2021, 167, 101874.	1.0	4
54	Effects of Mesoscale Dynamics on the Path of Fastâ€Sinking Particles to the Deep Ocean: A Modeling Study. Journal of Geophysical Research: Oceans, 2022, 127, .	1.0	4

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55	Mesoscale Eddy Kinetic Energy Budgets and Transfers between Vertical Modes in the Agulhas Current. Journal of Physical Oceanography, 2022, 52, 677-704.	0.7	3
56	Bottom Mixing Enhanced by Tropical Stormâ€Generated Nearâ€Inertial Waves Entering Critical Layers in the Straits of Florida. Geophysical Research Letters, 2021, 48, e2021GL093773.	1.5	1
57	The Interaction of Two Unsteady Point Vortex Sources in a Deformation Field in 2D Incompressible Flows. Regular and Chaotic Dynamics, 2021, 26, 618-646.	0.3	1
58	Eady Baroclinic Instability of a Circular Vortex. Symmetry, 2022, 14, 1438.	1.1	0