Eyal Heifetz

List of Publications by Year
in descending order

67	1,522	279487	329751
papers	citations	23 h-index	37 g-index

67	67	67	1518
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Stirring of the northeast Atlantic spring bloom: A Lagrangian analysis based on multisatellite data. Journal of Geophysical Research, 2007, 112, .	3.3	206
2	The counter-propagating Rossby-wave perspective on baroclinic instability. I: Mathematical basis. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 211-231.	1.0	87
3	Long range transport of a quasi isolated chlorophyll patch by an Agulhas ring. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	80
4	Instability in Stratified Shear Flow: Review of a Physical Interpretation Based on Interacting Waves. Applied Mechanics Reviews, 2011, 64, .	4.5	80
5	Production regimes in the northeast Atlantic: A study based on Sea-viewing Wide Field-of-view Sensor (SeaWiFS) chlorophyll and ocean general circulation model mixed layer depth. Journal of Geophysical Research, 2005, 110, .	3.3	63
6	Counter-propagating Rossby waves in the barotropic Rayleigh model of shearinstability. Quarterly Journal of the Royal Meteorological Society, 1999, 125, 2835-2853.	1.0	60
7	Relating optimal growth to counterpropagating Rossby waves in shear instability. Physics of Fluids, 2005, 17, 064107.	1.6	59
8	Quantitative analysis of seismogenic shear-induced turbulence in lake sediments. Geology, 2010, 38, 303-306.	2.0	53
9	The Origin of the â€œSeasonsâ€•in Space Weather. Scientific Reports, 2017, 7, 14750.	1.6	53
10	Soft sediment deformation by Kelvin Helmholtz Instability: A case from Dead Sea earthquakes. Earth and Planetary Science Letters, 2005, 236, 497-504.	1.8	48
11	Rossby Waves in Astrophysics. Space Science Reviews, 2021, 217, 1.	3.7	47
12	Relating Overreflection and Wave Geometry to the Counterpropagating Rossby Wave Perspective: Toward a Deeper Mechanistic Understanding of Shear Instability. Journals of the Atmospheric Sciences, 2007, 64, 2238-2261.	0.6	42
13	Analysis of conveyor belts in winter Mediterranean cyclones. Theoretical and Applied Climatology, 2010, 99, 441-455.	1.3	42
14	Surface circulation of the eastern Mediterranean Levantine basin: Insights from analyzing 14 years of satellite altimetry data. Journal of Geophysical Research, 2010, 115, .	3.3	39
15	Inertial instability of intense stratified anticyclones. Part 1. Generalized stability criterion. Journal of Fluid Mechanics, 2013, 732, 457-484.	1.4	35
16	A Buoyancyâ€“Vorticity Wave Interaction Approach to Stratified Shear Flow. Journals of the Atmospheric Sciences, 2008, 65, 2615-2630.	0.6	34
17	Intrusion of coastal waters into the pelagic eastern Mediterranean: in situ and satellite-based characterization. Biogeosciences, 2013, 10, 3349-3357.	1.3	33
18	Toward a Thermo-hydrodynamic Like Description of SchrÃ¶dinger Equation via the Madelung Formulation and Fisher Information. Foundations of Physics, 2015, 45, 1514-1525.	0.6	31

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19	The counter-propagating Rossby-wave perspective on baroclinic instability. II: Application to the Charney model. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 233-258.	1.0	30
20	Velocities and driving pressures of clay-rich sediments injected into clastic dykes during earthquakes. Geophysical Journal International, 2008, 175, 1095-1107.	1.0	26
21	Vorticity inversion and action-at-a-distance instability in stably stratified shear flow. Journal of Fluid Mechanics, 2011, 670, 301-325.	1.4	24
22	Interacting vorticity waves as an instability mechanism for magnetohydrodynamic shear instabilities. Journal of Fluid Mechanics, 2015, 767, 199-225.	1.4	24
23	The counter-propagating Rossby-wave perspective on baroclinic instability. Part IV: Nonlinear life cycles. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 1425-1440.	1.0	23
24	Global Wildfire Susceptibility Mapping Based on Machine Learning Models. Forests, 2022, 13, 1050.	0.9	22
25	Interaction between counterpropagating Rossby waves and capillary waves in planar shear flows. Physics of Fluids, 2015, 27, 044104.	1.6	17
26	Counterâ€propagating rossby waves in the barotropic rayleigh model of shear instability. Quarterly Journal of the Royal Meteorological Society, 1999, 125, 2835-2853.	1.0	16
27	On Entropy Production in the Madelung Fluid and the Role of Bohmâ€™s Potential in Classical Diffusion. Foundations of Physics, 2016, 46, 815-824.	0.6	16
28	On the violation of gradient wind balance at the top of tropical cyclones. Geophysical Research Letters, 2017, 44, 8017-8026.	1.5	16
29	Apparent Absolute Instability and the Continuous Spectrum. Journals of the Atmospheric Sciences, 2000, 57, 3592-3608.	0.6	14
30	A Geometric Interpretation of Eddy Reynolds Stresses in Barotropic Ocean Jets. Journal of Physical Oceanography, 2016, 46, 2285-2307.	0.7	14
31	Canonical Hamiltonian representation of pseudoenergy in shear flows using counterâ€propagating Rossby waves. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 2161-2167.	1.0	12
32	On the role of vortex stretching in energy optimal growth of three-dimensional perturbations on plane parallel shear flows. Journal of Fluid Mechanics, 2012, 707, 369-380.	1.4	12
33	On the Formation of an Elevated Nocturnal Inversion Layer in the Presence of a Low-Level Jet: A Case Study. Boundary-Layer Meteorology, 2012, 144, 441-449.	1.2	10
34	Generalized Stability of Nongeostrophic Baroclinic Shear Flow. Part I: Large Richardson Number Regime. Journals of the Atmospheric Sciences, 2003, 60, 2083-2100.	0.6	9
35	Understanding the destabilizing role for surface tension in planar shear flows in terms of wave interaction. Physical Review Fluids, 2017, 2, .	1.0	9
36	On the mechanism of self gravitating Rossby interfacial waves in proto-stellar accretion discs. Geophysical and Astrophysical Fluid Dynamics, 2016, 110, 274-294.	0.4	8

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37	Relating quantum mechanics with hydrodynamic turbulence. Europhysics Letters, 2018, 122, 40002.	0.7	8
38	On the Parcel Method and the Baroclinic Wedge of Instability. Journals of the Atmospheric Sciences, 1998, 55, 788-795.	0.6	7
39	Generalized Stability of Nongeostrophic Baroclinic Shear Flow. Part II: Intermediate Richardson Number Regime. Journals of the Atmospheric Sciences, 2007, 64, 4366-4382.	0.6	7
40	Nonâ€normal growth in symmetric shear flow. Quarterly Journal of the Royal Meteorological Society, 2008, 134, 1627-1633.	1.0	7
41	A Physical Interpretation of the Wind-Wave Instability as Interacting Waves. Journal of Physical Oceanography, 2017, 47, 1441-1455.	0.7	7
42	Derivation of the Local-Mean Stochastic Quantum Force. Fluctuation and Noise Letters, 2017, 16, 1750028.	1.0	6
43	Relating Observations of Gradient Nonbalance at the Top of Hurricanes With Their Warm Core Structures. Geophysical Research Letters, 2019, 46, 11510-11519.	1.5	6
44	Thermal evolution of Comet P/Tempel 1â€"Representing the group of targets for the CRAF and CNSR missions. Icarus, 1989, 79, 116-124.	1.1	5
45	A Model for the Changing Pore Structure and Dust Grain Size Distribution in a Porous Comet Nucleus. Icarus, 1997, 126, 342-350.	1.1	5
46	On the nonnormalâ€"nonlinear interaction mechanism between counter-propagating Rossby waves. Theoretical and Computational Fluid Dynamics, 2015, 29, 205-224.	0.9	5
47	A generalized action-angle representation of wave interaction in stratified shear flows. Journal of Fluid Mechanics, 2018, 834, 220-236.	1.4	5
48	Normal form of synchronization and resonance between vorticity waves in shear flow instability. Physical Review E, 2019, 100, 043105.	0.8	5
49	Madelung transformation of the quantum bouncer problem. Europhysics Letters, 2020, 130, 10002.	0.7	5
50	Effective classical stochastic theory for quantum tunneling. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126511.	0.9	5
51	Zero absolute vorticity state in thermal equilibrium as a hydrodynamic analog of the quantum harmonic oscillator ground state. Physics of Fluids, 2021, 33, 031708.	1.6	5
52	Physical mechanism of centrifugal-gravity wave resonant instability in azimuthally symmetric swirling flows. Physical Review Fluids, 2017, 2, .	1.0	5
53	Machine-Learning-based evaluation of the time-lagged effect of meteorological factors on 10-hour dead fuel moisture content. Forest Ecology and Management, 2022, 505, 119897.	1.4	5
54	On the equilibration of asymmetric barotropic instability. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 2444-2464.	1.0	4

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55	The counter-propagating Rossby-wave perspective on baroclinic instability. I: Mathematical basis. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 211-231.	1.0	4
56	Fluid-like representation of Fickian diffusion. Physics of Fluids, 2022, 34, 011701.	1.6	4
57	Higherâ€order corrections for Rossby waves in a zonal channel on the Î²â€plane. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 1893-1898.	1.0	3
58	On the opposing roles of the Boussinesq and nonâ€Boussinesq baroclinic torques in surface gravity wave propagation. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 1056-1064.	1.0	3
59	Wave interactions in neutrally stable shear layers: Regular and singular modes, and non-modal growth. Physics of Fluids, 2020, 32, 074106.	1.6	3
60	Pairs of surface wave packets with zero-sum energy in the Hawking radiation analog. Physical Review D, 2020, 102, .	1.6	2
61	A minimal model for vertical shear instability in protoplanetary accretion disks. Geophysical and Astrophysical Fluid Dynamics, 2021, 115, 674-695.	0.4	2
62	Divergent versus Nondivergent Instabilities of Piecewise Uniform Shear Flows on the f Plane. Journal of Physical Oceanography, 2009, 39, 1685-1699.	0.7	1
63	Analogy between electro-magnetic waves in cold unmagnetized plasma and shallow water inertio-gravity waves in geophysical systems. Journal of Physics Communications, 2021, 5, 125006.	0.5	1
64	Zero absolute vorticity plane Couette flow as an hydrodynamic representation of quantum energy states under perpendicular magnetic field. Physics of Fluids, 2021, 33, 127120.	1.6	1
65	Re-examining the assumption of dominant regional wind and fire spread directions. International Journal of Wildland Fire, 2022, , .	1.0	1
66	Minimal nonlinear dynamical system for the interaction between vorticity waves and shear flows. Physical Review E, 2022, 105, .	0.8	1
67	Magnetohydrodynamic shear instabilities arising from interacting vorticity waves. , 2014, , .		0