Peter Davidson

List of Publications by Year
in descending order

61 papers	2,086 citations	279701 23 h-index	265120 42 g-index
62 all docs	62 docs citations	62 times ranked	1094 citing authors

#	Article	IF	Citations
1	Columnar heat transport via advection induced by inertial waves. International Journal of Heat and Fluid Flow, 2021, 87, 108703.	1.1	2
2	Evanescent inertial waves. Journal of Fluid Mechanics, 2021, 918, .	1.4	2
3	On the helicity characteristics and induced emf of magnetic-Coriolis wave packets. Geophysical Journal International, 2020, 223, 1398-1411.	1.0	1
4	On the generation and segregation of helicity in geodynamo simulations. Geophysical Journal International, 2020, 221, 741-757.	1.0	8
5	A physical conjecture for the dipolarâ€“multipolar dynamo transition. Journal of Fluid Mechanics, 2019, 874, 995-1020.	1.4	8
6	The evolution of laminar thermals. Journal of Fluid Mechanics, 2019, 878, 907-931.	1.4	6
7	Internally driven inertial waves in geodynamo simulations. Geophysical Journal International, 2018, 213, 1281-1295.	1.0	12
8	Are planetary dynamos driven by helical waves?. Journal of Plasma Physics, 2018, 84, .	0.7	9
9	On the spatial segregation of helicity by inertial waves in dynamo simulations and planetary cores. Journal of Fluid Mechanics, 2018, 851, 268-287.	1.4	12
10	Eye formation in rotating convection. Journal of Fluid Mechanics, 2017, 812, 890-904.	1.4	12
11	The dispersion of magnetic-Coriolis waves in planetary cores. Geophysical Journal International, 2017, 210, 18-26.	1.0	9
12	Inertialâ€“AlfvÃ©n waves as columnar helices in planetary cores. Journal of Fluid Mechanics, 2016, 805, .	1.4	18
13	Are there two regimes in strongly rotating turbulence?. Physics of Fluids, 2016, 28, .	1.6	5
14	Dynamics of stratified turbulence decaying from a high buoyancy Reynolds number. Journal of Fluid Mechanics, 2016, 786, 210-233.	1.4	42
15	Dynamos driven by helical waves: scaling laws for numerical dynamos and for the planets. Geophysical Journal International, 2016, 207, 680-690.	1.0	11
16	Rapidly-Rotating Turbulence and its Role in Planetary Dynamos. , 2016, , 35-59.		0
17	DNS of a Buoyant Turbulent Cloud under Rapid Rotation. , 2016, , 452-460.		1
18	Planetary dynamos driven by helical waves â€“ II. Geophysical Journal International, 2015, 202, 1646-1662.	1.0	25

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19	A phenomenological theory of rotating turbulence. Physics of Fluids, 2015, 27, .	1.6	14
20	Evolution of a turbulent cloud under rotation. Journal of Fluid Mechanics, 2014, 756, 488-509.	1.4	24
21	The dynamics and scaling laws of planetary dynamos driven by inertial waves. Geophysical Journal International, 2014, 198, 1832-1847.	1.0	43
22	The evolution of a stratified turbulent cloud. Journal of Fluid Mechanics, 2014, 739, 229-253.	1.4	17
23	A universal scaling for low-order structure functions in the log-law region of smooth- and rough-wall boundary layers. Journal of Fluid Mechanics, 2014, 752, 140-156.	1.4	25
24	Geometry and interaction of structures in homogeneous isotropic turbulence. Journal of Fluid Mechanics, 2012, 710, 453-481.	1.4	88
25	On freely decaying, anisotropic, axisymmetric Saffman turbulence. Journal of Fluid Mechanics, 2012, 706, 150-172.	1.4	22
26	Near-field investigation of turbulence produced by multi-scale grids. Physics of Fluids, 2012, 24, .	1.6	51
27	Long-range interactions in turbulence and the energy decay problem. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 796-810.	1.6	7
28	The minimum energy decay rate in quasi-isotropic grid turbulence. Physics of Fluids, 2011, 23, 085108.	1.6	25
29	Freely decaying, homogeneous turbulence generated by multi-scale grids. Journal of Fluid Mechanics, 2011, 680, 417-434.	1.4	87
30	Freely decaying two-dimensional turbulence. Journal of Fluid Mechanics, 2010, 659, 351-364.	1.4	17
31	On the decay of low-magnetic-Reynolds-number turbulence in an imposed magnetic field. Journal of Fluid Mechanics, 2010, 651, 295-318.	1.4	20
32	On the decay of Saffman turbulence subject to rotation, stratification or an imposed magnetic field. Journal of Fluid Mechanics, 2010, 663, 268-292.	1.4	37
33	A simple model for the streamwise fluctuations in the log-law region of a boundary layer. Physics of Fluids, 2009, 21, .	1.6	25
34	The role of angular momentum conservation in homogeneous turbulence. Journal of Fluid Mechanics, 2009, 632, 329-358.	1.4	38
35	The competition between quadratic and integral invariants in inviscid truncated two-dimensional and quasigeostrophic shallow-water turbulence. Physics of Fluids, 2009, 21, 125102.	1.6	3
36	Integral invariants of two-dimensional and quasigeostrophic shallow-water turbulence. Physics of Fluids, 2008, 20, .	1.6	8

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37	On the generation and flux of enstrophy in isotropic turbulence. Journal of Turbulence, 2008, 9, N42.	0.5	11
38	Cascades and fluxes in two-dimensional turbulence. Physics of Fluids, 2008, 20, 025106.	1.6	5
39	On the formation of cyclones and anticyclones in a rotating fluid. Physics of Fluids, 2008, 20, 085104.	1.6	37
40	Structure formation in homogeneous freely decaying rotating turbulence. Journal of Fluid Mechanics, 2008, 598, 81-105.	1.4	105
41	On the deficiency of even-order structure functions as inertial-range diagnostics. Journal of Fluid Mechanics, 2008, 602, 287-302.	1.4	6
42	Evolution of localized blobs of swirling or buoyant fluid with and without an ambient magnetic field. Physical Review E, 2007, 75, 026304.	0.8	4
43	On the large-scale structure of homogeneous two-dimensional turbulence. Journal of Fluid Mechanics, 2007, 580, 431-450.	1.4	16
44	On the decay of isotropic turbulence. Journal of Fluid Mechanics, 2006, 564, 455.	1.4	112
45	On the evolution of eddies in a rapidly rotating system. Journal of Fluid Mechanics, 2006, 557, 135.	1.4	94
46	Weak mean flows induced by anisotropic turbulence impinging onto planar and undulating surfaces. Journal of Fluid Mechanics, 2006, 556, 329.	1.4	12
47	The logarithmic structure function law in wall-layer turbulence. Journal of Fluid Mechanics, 2006, 550, 51.	1.4	73
48	Identifying Turbulent Energy Distributions in Real, Rather than Fourier, Space. Physical Review Letters, 2005, 95, 214501.	2.9	41
49	Anisotropic evolution of small isolated vortices within the core of the Earth. Physics of Fluids, 2004, 16, 1242-1254.	1.6	12
50	Hydromagnetic edge waves and instability in reduction cells. Journal of Fluid Mechanics, 2003, 493, 121-130.	1.4	12
51	Evolution of a vortex in a rotating conducting fluid. Journal of Fluid Mechanics, 2003, 493, 181-190.	1.4	3
52	A new approach to numerical simulation of melt flows and interface instability in hall-hÃ©roult cells. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1541-1550.	1.0	51
53	An energy criterion for the linear stability of conservative flows. Journal of Fluid Mechanics, 2000, 402, 329-348.	1.4	11
54	MAGNETOHYDRODYNAMICS IN MATERIALS PROCESSING. Annual Review of Fluid Mechanics, 1999, 31, 273-300.	10.8	212

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55	Energy constraints in forced recirculating MHD flows. Journal of Fluid Mechanics, 1998, 375, 319-343.	1.4	5
56	On the application of the Kelvinâ€"Arnol'd energy principle to the stability of forced two-dimensional inviscid flows. Journal of Fluid Mechanics, 1998, 356, 221-257.	1.4	12
57	Stability of interfacial waves in aluminium reduction cells. Journal of Fluid Mechanics, 1998, 362, 273-295.	1.4	78
58	The role of angular momentum in the magnetic damping of turbulence. Journal of Fluid Mechanics, 1997, 336, 123-150.	1.4	85
59	Magnetic damping of jets and vortices. Journal of Fluid Mechanics, 1995, 299, 153-186.	1.4	108
60	The importance of secondary flow in the rotary electromagnetic stirring of steel during continuous casting. Flow, Turbulence and Combustion, 1987, 44, 241-259.	0.2	35
61	On the application of the Kelvinâ€"Arnol'd energy principle to the stability of forced two-dimensional inviscid flows. , 0, .		1