Sebastien Galtier

List of Publications by Year
in descending order

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95 papers	3,467 citations	159585 30 h-index	144013 57 g-index
97 all docs	97 docs citations	97 times ranked	1173 citing authors

#	Article	IF	Citations
1	An In-depth Numerical Study of Exact Laws for Compressible Hall Magnetohydrodynamic Turbulence. Astrophysical Journal, 2022, 927, 205.	4.5	6
2	Energy Transfer, Discontinuities, and Heating in the Inner Heliosphere Measured with a Weak and Local Formulation of the Politanoâ€“Pouquet Law. Astrophysical Journal, 2022, 927, 200.	4.5	6
3	The incompressible energy cascade rate in anisotropic solar wind turbulence. Astronomy and Astrophysics, 2022, 661, A116.	5.1	15
4	Wave turbulence: the case of capillary waves. Geophysical and Astrophysical Fluid Dynamics, 2021, 115, 234-257.	1.2	5
5	The Ion Transition Range of Solar Wind Turbulence in the Inner Heliosphere: Parker Solar Probe Observations. Astrophysical Journal Letters, 2021, 909, L7.	8.3	20
6	A compact exact law for compressible isothermal Hall magnetohydrodynamic turbulence. Journal of Plasma Physics, 2021, 87, .	2.1	12
7	Proof of the zeroth law of turbulence in one-dimensional compressible magnetohydrodynamics and shock heating. Physical Review E, 2021, 103, 063217.	2.1	4
8	The Evolution of Compressible Solar Wind Turbulence in the Inner Heliosphere: PSP, THEMIS, and MAVEN Observations. Astrophysical Journal, 2021, 919, 19.	4.5	21
9	Direct Evidence of a Dual Cascade in Gravitational Wave Turbulence. Physical Review Letters, 2021, 127, 131101.	7.8	9
10	Fluid Energy Cascade Rate and Kinetic Damping: New Insight from 3D Landau-fluid Simulations. Astrophysical Journal, 2021, 923, 122.	4.5	4
11	A Plausible Model of Inflation Driven by Strong Gravitational Wave Turbulence. Universe, 2020, 6, 98.	2.5	3
12	Magnetic effects on fields morphologies and reversals in geodynamo simulations. Physics of the Earth and Planetary Interiors, 2020, 307, 106542.	1.9	5
13	Inertial/kinetic-AlfvÃ©n wave turbulence: A twin problem in the limit of local interactions. Physical Review Fluids, 2020, 5, .	2.5	9
14	Compressible Turbulence in the Interstellar Medium: New Insights from a High-resolution Supersonic Turbulence Simulation. Astrophysical Journal, 2020, 904, 160.	4.5	20
15	On Exact Laws in Incompressible Hall Magnetohydrodynamic Turbulence. Astrophysical Journal, 2019, 881, 50.	4.5	31
16	Spectrum in Kinetic AlfvÃ©n Wave Turbulence: Implications for the Solar Wind. Astrophysical Journal Letters, 2019, 880, L10.	8.3	13
17	Nonlinear diffusion models for gravitational wave turbulence. Physica D: Nonlinear Phenomena, 2019, 390, 84-88.	2.8	13
18	The focusing problem for the Leith model of turbulence: a self-similar solution of the third kind. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 155501.	2.1	4

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19	Energy Cascade Rate Measured in a Collisionless Space Plasma with MMS Data and Compressible Hall Magnetohydrodynamic Turbulence Theory. Physical Review Letters, 2019, 123, 245101.	7.8	47
20	Inverse cascade of hybrid helicity in BÎ© -MHD turbulence. Physical Review Fluids, 2019, 4, .	2.5	5
21	On the origin of the energy dissipation anomaly in (Hall) magnetohydrodynamics. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 205501.	2.1	19
22	Compressible Magnetohydrodynamic Turbulence in the Earthâ€™s Magnetosheath: Estimation of the Energy Cascade Rate Using inÂsitu Spacecraft Data. Physical Review Letters, 2018, 120, 055102.	7.8	68
23	Exact law for homogeneous compressible Hall magnetohydrodynamics turbulence. Physical Review E, 2018, 97, 013204.	2.1	40
24	Coexistence of Weak and Strong Wave Turbulence in Incompressible Hall Magnetohydrodynamics. Physical Review X, 2018, 8, .	8.9	11
25	Energy cascade rate in isothermal compressible magnetohydrodynamic turbulence. Journal of Plasma Physics, 2018, 84, .	2.1	34
26	Turbulence in space plasmas and beyond. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 293001.	2.1	22
27	Energy Cascade Rate in Compressible Fast and Slow Solar Wind Turbulence. Astrophysical Journal, 2017, 838, 9.	4.5	80
28	An alternative formulation for exact scaling relations in hydrodynamic and magnetohydrodynamic turbulence. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 015501.	2.1	24
29	Turbulence of Weak Gravitational Waves in the Early Universe. Physical Review Letters, 2017, 119, 221101.	7.8	39
30	Exact scaling laws for helical three-dimensional two-fluid turbulent plasmas. Physical Review E, 2016, 94, 063206.	2.1	14
31	SCALING OF COMPRESSIBLE MAGNETOHYDRODYNAMIC TURBULENCE IN THE FAST SOLAR WIND. Astrophysical Journal Letters, 2016, 829, L27.	8.3	59
32	Chiral exact relations for helicities in Hall magnetohydrodynamic turbulence. Physical Review E, 2016, 93, 033120.	2.1	19
33	Direct Evidence of the Transition from Weak to Strong Magnetohydrodynamic Turbulence. Physical Review Letters, 2016, 116, 105002.	7.8	46
34	Weak magnetohydrodynamic turbulence and intermittency. Journal of Fluid Mechanics, 2015, 770, .	3.4	37
35	Entanglement of helicity and energy in kinetic AlfvÃ©n wave/whistler turbulence. Journal of Plasma Physics, 2015, 81, .	2.1	17
36	Anomalous spectral laws in differential models of turbulence. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 285501.	2.1	20

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37	Weak turbulence theory for rotating magnetohydrodynamics and planetary flows. Journal of Fluid Mechanics, 2014, 757, 114-154.	3.4	25
38	Theory for helical turbulence under fast rotation. Physical Review E, 2014, 89, 041001.	2.1	11
39	A Kolmogorov-like exact relation for compressible polytropic turbulence. Journal of Fluid Mechanics, 2014, 742, 230-242.	3.4	36
40	Anomalous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msubsup><mml:mrow><mml:mi>k</mml:mi></mml:mrow><mml:mrow><mml:mo>âŠ¥</mml:mo> in Electron Magnetohydrodynamic Turbulence. Physical Review Letters, 2013, 111, 264501.	7.8	30
41	Weak turbulence in two-dimensional magnetohydrodynamics. Physical Review E, 2013, 87, .	2.1	11
42	Exact relation with two-point correlation functions and phenomenological approach for compressible magnetohydrodynamic turbulence. Physical Review E, 2013, 87, 013019.	2.1	101
43	Wave Turbulence in Astrophysics. World Scientific Series on Nonlinear Science, Series A, 2013, , 73-111.	0.0	5
44	Spontaneous Chiral Symmetry Breaking of Hall Magnetohydrodynamic Turbulence. Physical Review Letters, 2012, 109, 194501.	7.8	58
45	Kolmogorov laws for stratified turbulence. Journal of Fluid Mechanics, 2012, 709, 659-670.	3.4	17
46	KOLMOGOROV VECTORIAL LAW FOR SOLAR WIND TURBULENCE. Astrophysical Journal, 2012, 746, 184.	4.5	12
47	Exact Relation for Correlation Functions in Compressible Isothermal Turbulence. Physical Review Letters, 2011, 107, 134501.	7.8	163
48	Third-order ElsÃsser moments in axisymmetric MHD turbulence. Comptes Rendus Physique, 2011, 12, 151-159.	0.9	6
49	Two-dimensional state in driven magnetohydrodynamic turbulence. Physical Review E, 2011, 83, 026405.	2.1	23
50	A UNIVERSAL LAW FOR SOLAR-WIND TURBULENCE AT ELECTRON SCALES. Astrophysical Journal, 2010, 721, 1421-1424.	4.5	34
51	NONLINEAR DIFFUSION EQUATIONS FOR ANISOTROPIC MAGNETOHYDRODYNAMIC TURBULENCE WITH CROSS-HELICITY. Astrophysical Journal, 2010, 722, 1977-1983.	4.5	17
52	Solar Coronal Heating via Alfvèn Wave Turbulence. , 2010, , .		0
53	Solar Wind Turbulence: New Questions and Possible Solutions. , 2010, , .		0
54	EXACT VECTORIAL LAW FOR AXISYMMETRIC MAGNETOHYDRODYNAMICS TURBULENCE. Astrophysical Journal, 2009, 704, 1371-1384.	4.5	15

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55	Wave turbulence in magnetized plasmas. Nonlinear Processes in Geophysics, 2009, 16, 83-98.	1.3	34
56	Consequence of space correlation foliation for electron magnetohydrodynamic turbulence. Physics of Plasmas, 2009, 16, 112310.	1.9	2
57	Exact vectorial law for homogeneous rotating turbulence. Physical Review E, 2009, 80, 046301.	2.1	16
58	Exact scaling laws for 3D electron MHD turbulence. Journal of Geophysical Research, 2008, 113, .	3.3	23
59	Large-scale magnetic field sustainment by forced MHD wave turbulence. Journal of Turbulence, 2008, 9, N40.	1.4	4
60	von KÃ¡rmÃ¡nâ€“Howarth equations for Hall magnetohydrodynamic flows. Physical Review E, 2008, 77, 015302.	2.1	90
61	Development of anisotropy in incompressible magnetohydrodynamic turbulence. Physical Review E, 2008, 78, 066301.	2.1	48
62	Energy Decay Laws in Strongly Anisotropic Magnetohydrodynamic Turbulence. Physical Review Letters, 2008, 100, 074502.	7.8	29
63	An anisotropic turbulent model for solar coronal heating. Astronomy and Astrophysics, 2008, 490, 325-337.	5.1	16
64	Anisotropic fluxes and nonlocal interactions in magnetohydrodynamic turbulence. Physical Review E, 2007, 76, 056313.	2.1	39
65	On waves in incompressible Hall magnetohydrodynamics. Journal of Plasma Physics, 2007, 73, 723-730.	2.1	40
66	Multiscale Hallâ€Magnetohydrodynamic Turbulence in the Solar Wind. Astrophysical Journal, 2007, 656, 560-566.	4.5	113
67	Hall-MHD turbulence in the solar wind. , 2007, , 70-72.		1
68	Anisotropy in three-dimensional MHD turbulence. Springer Proceedings in Physics, 2007, , 26-28.	0.2	0
69	Extended spectral scaling laws for shear-AlfvÃ©n wave turbulence. Physics of Plasmas, 2006, 13, 114505.	1.9	30
70	Modeling the Radiative Signatures of Turbulent Heating in Coronal Loops. Astrophysical Journal, 2006, 651, 1219-1228.	4.5	40
71	Multi-scale Turbulence in the Inner Solar Wind. Journal of Low Temperature Physics, 2006, 145, 59-74.	1.4	26
72	Wave turbulence in incompressible Hall magnetohydrodynamics. Journal of Plasma Physics, 2006, 72, 721.	2.1	161

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73	Anisotropic wave turbulence in electron MHD. Plasma Physics and Controlled Fusion, 2005, 47, B691-B701.	2.1	5
74	On spectral scaling laws for incompressible anisotropic magnetohydrodynamic turbulence. Physics of Plasmas, 2005, 12, 092310.	1.9	88
75	Influence of the definition of dissipative events on their statistics. Astronomy and Astrophysics, 2005, 436, 355-362.	5.1	22
76	Kinematic turbulent dynamo in the large Prandtl number regime. Astronomy and Astrophysics, 2004, 414, 807-824.	5.1	2
77	Weak inertial-wave turbulence theory. Physical Review E, 2003, 68, 015301.	2.1	207
78	Anisotropic weak whistler wave turbulence in electron magnetohydrodynamics. Physics of Plasmas, 2003, 10, 3065-3076.	1.9	101
79	Anisotropic fluid turbulence in the interstellar medium and solar wind. Physics of Plasmas, 2003, 10, 1954-1962.	1.9	58
80	A solar cellular automata model issued from reduced MHD. AIP Conference Proceedings, 2003, , .	0.4	0
81	Weak turbulence of anisotropic shear-Alfvèn waves. AIP Conference Proceedings, 2003, , .	0.4	2
82	A simplified numerical model of coronal energy dissipation based on reduced MHD. Astronomy and Astrophysics, 2003, 406, 1061-1070.	5.1	26
83	Anisotropic Turbulence of Shear-AlfvÃ©n Waves. Astrophysical Journal, 2002, 564, L49-L52.	4.5	125
84	On wave turbulence in MHD. Nonlinear Processes in Geophysics, 2001, 8, 141-150.	1.3	12
85	Meromorphy and topology of localized solutions in the Thomasâ€“MHD model. Journal of Plasma Physics, 2001, 65, 365-406.	2.1	1
86	Non-local MHD turbulence. Physica D: Nonlinear Phenomena, 2001, 152-153, 646-652.	2.8	32
87	Statistical Study of Short Quiescent Times between Solar Flares in a 1D MHD Model. Solar Physics, 2001, 201, 133-136.	2.5	4
88	A weak turbulence theory for incompressible magnetohydrodynamics. Journal of Plasma Physics, 2000, 63, 447-488.	2.1	526
89	Intermittent heating in a model of solar coronal loops. Solar Physics, 2000, 197, 57-73.	2.5	26
90	Feedback of a small-scale magnetic dynamo. Physical Review E, 2000, 63, 016408.	2.1	2

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91	A One-Dimensional MHD Model of Solar Flares: Statistics or Physics?. Fluid Mechanics and Its Applications, 2000, , 283-292.	0.2	1
92	Parametric investigation of self-similar decay laws in MHD turbulent flows. Journal of Plasma Physics, 1999, 61, 507-541.	2.1	14
93	A Oneâ€dimensional Magnetohydrodynamic Model of Solar Flares: Emergence of a Population of Weak Events, and a Possible Road toward Nanoflares. Astrophysical Journal, 1999, 521, 483-489.	4.5	15
94	Solar Flare Statistics with a One-Dimensional Mhd Model. Solar Physics, 1998, 179, 141-165.	2.5	27
95	Self-Similar Energy Decay in Magnetohydrodynamic Turbulence. Physical Review Letters, 1997, 79, 2807-2810.	7.8	41