Uriel Frisch

List of Publications by Year
in descending order

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116	10,871	41258	29081
papers	citations	49 h-index	104 g-index

120	120	120	3798
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A simple dynamical model of intermittent fully developed turbulence. Journal of Fluid Mechanics, 1978, 87, 719.	1.4	950
2	Strong MHD helical turbulence and the nonlinear dynamo effect. Journal of Fluid Mechanics, 1976, 77, 321-354.	1.4	888
3	Chaotic streamlines in the ABC flows. Journal of Fluid Mechanics, 1986, 167, 353.	1.4	675
4	Small-scale structure of the Taylorâ€“Green vortex. Journal of Fluid Mechanics, 1983, 130, 411.	1.4	646
5	Possibility of an inverse cascade of magnetic helicity in magnetohydrodynamic turbulence. Journal of Fluid Mechanics, 1975, 68, 769-778.	1.4	483
6	Helical and Nonhelical Turbulent Dynamos. Physical Review Letters, 1981, 47, 1060-1064.	2.9	382
7	Lattice Gas Models for 3D Hydrodynamics. Europhysics Letters, 1986, 2, 291-297.	0.7	347
8	Solving linear stochastic differential equations. Journal of Mathematical Physics, 1974, 15, 524-534.	0.5	238
9	Dynamo action in a family of flows with chaotic streamlines. Geophysical and Astrophysical Fluid Dynamics, 1986, 36, 53-83.	0.4	234
10	Intermittency in nonlinear dynamics and singularities at complex times. Physical Review A, 1981, 23, 2673-2705.	1.0	208
11	Wavelet analysis of turbulence reveals the multifractal nature of the Richardson cascade. Nature, 1989, 338, 51-53.	13.7	208
12	Transverse velocity increments in turbulent flow using the RELIEF technique. Journal of Fluid Mechanics, 1997, 339, 287-307.	1.4	190
13	Theory of Stark broadeningâ€”II exact line profile with model microfield. Journal of Quantitative Spectroscopy and Radiative Transfer, 1971, 11, 1767-1783.	1.1	172
14	Turbulence: Challenges for Theory and Experiment. Physics Today, 1990, 43, 24-32.	0.3	172
15	Brownian motion of harmonic oscillator with stochastic frequency. Physica, 1973, 65, 303-320.	0.9	167
16	The inviscid Burgers equation with initial data of Brownian type. Communications in Mathematical Physics, 1992, 148, 623-641.	1.0	162
17	Hyperviscosity, Galerkin Truncation, and Bottlenecks in Turbulence. Physical Review Letters, 2008, 101, 144501.	2.9	157
18	d-dimensional turbulence. Physical Review A, 1978, 17, 747-762.	1.0	155

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19	Large-scale flow driven by the anisotropic kinetic alpha effect. Physica D: Nonlinear Phenomena, 1987, 28, 382-392.	1.3	152
20	Numerical simulation of the inverse cascade in two-dimensional turbulence. Physics of Fluids, 1984, 27, 1921.	1.4	145
21	Viscoelastic behaviour of cellular solutions to the Kuramoto-Sivashinsky model. Journal of Fluid Mechanics, 1986, 168, 221.	1.4	143
22	A note on the stability of a family of space-periodic Beltrami flows. Journal of Fluid Mechanics, 1987, 180, 557.	1.4	133
23	Extreme Deviations and Applications. Journal De Physique, I, 1997, 7, 1155-1171.	1.2	128
24	A reconstruction of the initial conditions of the Universe by optimal mass transportation. Nature, 2002, 417, 260-262.	13.7	124
25	Remarks on the renormalization group in statistical fluid dynamics. Physical Review A, 1983, 28, 1000-1002.	1.0	118
26	Finite time analyticity for the two and three dimensional Kelvin-Helmholtz instability. Communications in Mathematical Physics, 1981, 80, 485-516.	1.0	114
27	Intermittency in Passive Scalar Advection. Physical Review Letters, 1998, 80, 5532-5535.	2.9	110
28	On the decay of Burgers turbulence. Journal of Fluid Mechanics, 1997, 344, 339-374.	1.4	109
29	Reconstruction of the early Universe as a convex optimization problem. Monthly Notices of the Royal Astronomical Society, 2003, 346, 501-524.	1.6	109
30	Eddy viscosity of parity-invariant flow. Physical Review A, 1991, 43, 5355-5364.	1.0	108
31	Growth of correlations in magnetohydrodynamic turbulence. Physical Review A, 1986, 33, 4266-4276.	1.0	105
32	Spontaneous Singularity in Three-Dimensional Inviscid, Incompressible Flow. Physical Review Letters, 1980, 44, 572-575.	2.9	103
33	Further results on multifractality in shell models. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2533-2538.	1.6	103
34	Negative eddy viscosity in isotropically forced two-dimensional flow: linear and nonlinear dynamics. Journal of Fluid Mechanics, 1994, 260, 95-126.	1.4	91
35	On the multifractal properties of the energy dissipation derived from turbulence data. Journal of Fluid Mechanics, 1992, 238, 467-486.	1.4	76
36	Fully developed MHD turbulence near critical magnetic Reynolds number. Journal of Fluid Mechanics, 1981, 104, 419-443.	1.4	72

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37	Theory of Stark broadeningâ€"I soluble scalar model as a test. Journal of Quantitative Spectroscopy and Radiative Transfer, 1971, 11, 1753-1766.	1.1	69
38	Parastochastics. Journal of Mathematical Physics, 1970, 11, 364-390.	0.5	67
39	A numerical investigation of magnetic field generation in a flow with chaotic streamlines. Geophysical and Astrophysical Fluid Dynamics, 1984, 29, 13-18.	0.4	62
40	Time-analyticity of Lagrangian particle trajectories in ideal fluid flow. Journal of Fluid Mechanics, 2014, 749, 404-430.	1.4	61
41	Cauchyâ€™s almost forgotten Lagrangian formulation of the Euler equation for 3D incompressible flow. European Physical Journal H, 2014, 39, 325-351.	0.5	60
42	Singularities of Euler Flow? Not Out of the Blue!. Journal of Statistical Physics, 2003, 113, 761-781.	0.5	57
43	Simulating Fully Three-Dimensional External Flow by Lattice Gas Methods. Europhysics Letters, 1988, 7, 231-236.	0.7	56
44	Turbulence in Noninteger Dimensions by Fractal Fourier Decimation. Physical Review Letters, 2012, 108, 074501.	2.9	54
45	A Markovian random coupling model for turbulence. Journal of Fluid Mechanics, 1974, 65, 145-152.	1.4	52
46	Generation of large-scale structures in threedimensional flow lacking parity-invariance. Journal of Fluid Mechanics, 1989, 205, 341.	1.4	52
47	Is Multiscaling an Artifact in the Stochastically Forced Burgers Equation?. Physical Review Letters, 2005, 94, 194501.	2.9	52
48	Modified dissipativity for a non-linear evolution equation arising in turbulence. Archive for Rational Mechanics and Analysis, 1979, 71, 237-256.	1.1	49
49	Wavelet transforms of self-similar processes. Physica D: Nonlinear Phenomena, 1991, 54, 58-64.	1.3	47
50	Helicity is unnecessary for alpha effect dynamos, but it helps. Geophysical and Astrophysical Fluid Dynamics, 1988, 42, 151-161.	0.4	46
51	Kicked Burgers turbulence. Journal of Fluid Mechanics, 2000, 416, 239-267.	1.4	46
52	Resonance phenomenon for the Galerkin-truncated Burgers and Euler equations. Physical Review E, 2011, 84, 016301.	0.8	46
53	Geometric formulation of the Cauchy invariants for incompressible Euler flow in flat and curved spaces. Journal of Fluid Mechanics, 2017, 825, 412-478.	1.4	42
54	Relation between the lattice Boltzmann equation and the Navier-stokes equations. Physica D: Nonlinear Phenomena, 1991, 47, 231-232.	1.3	40

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55	Bounds on energy flux for finite energy turbulence. Journal of Fluid Mechanics, 1975, 72, 417.	1.4	39
56	Stochastic Resonance in One-Dimensional Random Media. Physical Review A, 1973, 8, 1416-1421.	1.0	38
57	Non-Lte Transfer. Â Â Revisited. Monthly Notices of the Royal Astronomical Society, 1975, 173, 167-182.	1.6	36
58	Low-viscosity lattice gases. Journal of Statistical Physics, 1990, 59, 1187-1226.	0.5	36
59	Nature of complex singularities for the 2D Euler equation. Physica D: Nonlinear Phenomena, 2006, 219, 40-59.	1.3	35
60	Extended self-similarity works for the Burgers equation and why. Journal of Fluid Mechanics, 2010, 649, 275-285.	1.4	35
61	On the exponential flattening of current sheets near neutral X-points in two-dimensional ideal MHD flow. Journal of Plasma Physics, 1985, 33, 191-198.	0.7	34
62	The Taylor-Green vortex and fully developed turbulence. Journal of Statistical Physics, 1984, 34, 1049-1063.	0.5	33
63	Crossover Dimensions for Fully Developed Turbulence. Physical Review Letters, 1976, 37, 895-897.	2.9	32
64	How smooth are particle trajectories in a Î›CDM Universe?. Monthly Notices of the Royal Astronomical Society, 2015, 452, 1421-1436.	1.6	32
65	Dynamo effect in parity-invariant flow with large and moderate separation of scales. Geophysical and Astrophysical Fluid Dynamics, 2001, 95, 227-268.	0.4	30
66	Total reflection of a plane wave by a semi-infinite random medium. Journal of Plasma Physics, 1972, 8, 217-229.	0.7	27
67	Large-scale Kolmogorov flow on the beta-plane and resonant wave interactions. Physica D: Nonlinear Phenomena, 1996, 94, 36-56.	1.3	27
68	Shell-crossing in quasi-one-dimensional flow. Monthly Notices of the Royal Astronomical Society, 2017, 471, 671-679.	1.6	27
69	Eddy viscosity of three-dimensional flow. Journal of Fluid Mechanics, 1995, 288, 249-264.	1.4	24
70	Turbulence with a spectral gap. Physics of Fluids, 1983, 26, 877.	1.4	23
71	A Very Smooth Ride in a Rough Sea. Communications in Mathematical Physics, 2014, 326, 499-505.	1.0	23
72	Intermittency in fractal Fourier hydrodynamics: Lessons from the Burgers equation. Physical Review E, 2016, 93, 033109.	0.8	23

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73	On the probability density function of velocity gradients in fully developed turbulence. Fluid Dynamics Research, 1991, 8, 139-142.	0.6	22
74	Dispersive Stabilization of the Inverse Cascade for the Kolmogorov Flow. Physical Review Letters, 1999, 82, 4440-4443.	2.9	22
75	Universal Decay of Scalar Turbulence. Physical Review Letters, 2001, 86, 2305-2308.	2.9	22
76	A Borel Transform Method for Locating Singularities of Taylor and Fourier Series. Journal of Statistical Physics, 2007, 127, 1095-1119.	0.5	21
77	Real-Space Manifestations of Bottlenecks in Turbulence Spectra. Physical Review Letters, 2013, 110, 064501.	2.9	21
78	The Cauchyâ€“Lagrangian method for numerical analysis of Euler flow. Journal of Computational Physics, 2016, 306, 320-342.	1.9	21
79	Non-Lte Transfer – II TWO-LEVEL ATOMS WITH STOCHASTIC VELOCITY FIELD. Monthly Notices of the Royal Astronomical Society, 1976, 175, 157-175.	1.6	20
80	Comments on the quasi-normal Markovian approximation for fully-developed turbulence. Journal of Fluid Mechanics, 1980, 97, 181.	1.4	20
81	Probability distribution functions of derivatives and increments for decaying Burgers turbulence. Physical Review E, 2000, 61, 1395-1402.	0.8	20
82	The analytic structure of 2D Euler flow at short times. Fluid Dynamics Research, 2005, 36, 221-237.	0.6	20
83	Genesis of dâ€™Alembertâ€™s paradox and analytical elaboration of the drag problem. Physica D: Nonlinear Phenomena, 2008, 237, 1878-1886.	1.3	19
84	From Newtonâ€™s mechanics to Eulerâ€™s equations. Physica D: Nonlinear Phenomena, 2008, 237, 1855-1869.	1.3	18
85	The Mongeâ€“AmpÃ¨re equation: Various forms and numerical solution. Journal of Computational Physics, 2010, 229, 5043-5061.	1.9	18
86	The two-dimensional Navier-Stokes equations with a large-scale instability of the Kuramoto-Sivashinsky type: Numerical exploration on the Connection Machine. Journal of Scientific Computing, 1991, 6, 425-452.	1.1	17
87	Chaotic cascades with Kolmogorov 1941 scaling. Journal of Statistical Physics, 1994, 75, 781-795.	0.5	14
88	Bifractality of the devilâ€™s staircase appearing in the burgers equation with brownian initial velocity. Journal of Statistical Physics, 1997, 88, 1151-1164.	0.5	14
89	Does multifractal theory of turbulence have logarithms in the scaling relations?. Journal of Fluid Mechanics, 2005, 542, 97.	1.4	13
90	Complex-space singularities of 2D Euler flow in Lagrangian coordinates. Physica D: Nonlinear Phenomena, 2008, 237, 1951-1955.	1.3	13

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91	Unveiling the singular dynamics in the cosmic large-scale structure. Monthly Notices of the Royal Astronomical Society: Letters, 2021, 505, L90-L94.	1.2	13
92	Suppressing thermalization and constructing weak solutions in truncated inviscid equations of hydrodynamics: Lessons from the Burgers equation. Physical Review Research, 2020, 2, .	1.3	13
93	A method of cauchy integral equation for non-coherent transfer in half-space. Journal of Quantitative Spectroscopy and Radiative Transfer, 1982, 28, 361-375.	1.1	12
94	Renormalization-group approach to noncoherent radiative transfer. Physical Review A, 1978, 17, 1049-1057.	1.0	11
95	Entire Solutions of Hydrodynamical Equations with Exponential Dissipation. Communications in Mathematical Physics, 2010, 293, 519-543.	1.0	11
96	Inertial-diffusive range for a passive scalar advected by a white-in-time velocity field. Europhysics Letters, 1996, 35, 683-688.	0.7	10
97	Non-LTE transfer - III. Asymptotic expansion for small isin. Monthly Notices of the Royal Astronomical Society, 1977, 181, 273-280.	1.6	9
98	Nelkin scaling for the Burgers equation and the role of high-precision calculations. Physical Review E, 2012, 85, 015301.	0.8	9
99	Report on workshop on small-diffusivity dynamos and dynamical systems. Geophysical and Astrophysical Fluid Dynamics, 1990, 52, 263-270.	0.4	8
100	A Constructive Approach to Regularity of Lagrangian Trajectories for Incompressible Euler Flow in a Bounded Domain. Communications in Mathematical Physics, 2017, 351, 689-707.	1.0	8
101	On Multifractality and Fractional Derivatives. Journal of Statistical Physics, 2002, 108, 1181-1202.	0.5	7
102	A contemporary look at Hermann Hankelâ€™s 1861 pioneering work on Lagrangian fluid dynamics. European Physical Journal H, 2017, 42, 537-556.	0.5	7
103	Backscattering and localization of highâ€frequency waves in a oneâ€dimensional random medium. Journal of Mathematical Physics, 1984, 25, 1378-1381.	0.5	6
104	A new large-scale instability in three-dimensional incompressible flows lacking parity-invariance. Fluid Dynamics Research, 1988, 3, 295-298.	0.6	6
105	Application of Optimal Transport Theory to Reconstruction of the Early Universe. Journal of Mathematical Sciences, 2006, 133, 1539-1542.	0.1	6
106	Asymptotic Solutions to Dynamics of Many-Body Systems and Classical Continuum Equations. Current Developments in Mathematics, 1998, 1998, 155-236.	0.1	6
107	The collective birth of multifractals. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 451002.	0.7	5
108	Is there finite-time blow-up in 3-D Euler flow?. Current Developments in Mathematics, 1997, 1997, 193-195.	0.1	4

#	ARTICLE	IF	CITATIONS
109	The Cauchy-Lagrange method for 3D-axisymmetric wall-bounded and potentially singular incompressible Euler flows. Journal of Computational Physics, 2022, 449, 110758.	1.9	4
110	Lattice gas automata for the Navier-Stokes equations. a new approach to hydrodynamics and turbulence. Physica Scripta, 1989, 40, 423-423.	1.2	3
111	The two-dimensional Navier-Stokes-Kuramoto-Sivashinsky equation on the Connection Machine. Computing Systems in Engineering: an International Journal, 1995, 6, 325-329.	0.5	1
112	Turbulence nears a final answer. Physics World, 1999, 12, 53-53.	0.0	1
113	Multifractality of the Feigenbaum Attractor and Fractional Derivatives. Journal of Statistical Physics, 2005, 121, 671-695.	0.5	1
114	Wavelet analysis of the standard map: Structure and scaling. Celestial Mechanics and Dynamical Astronomy, 1993, 56, 263-272.	0.5	0
115	Book Review of Magnetohydrodynamic Turbulence, by Dieter Biskamp, Cambridge University Press, 2003, XII+297 pp., A£65.00, $95, hardback (ISBN 0-521-81011-6).. Geophysical and Astrophysical Fluid Dynamics, 2004, 98, 173-174.	0.4	0
116	Editorial introduction to the special issue â€œPlasma physics in the 20th century as told by playersâ€: European Physical Journal H, 2018, 43, 337-353.	0.5	0