

Uriel Frisch

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114
papers

9,019
citations

45
h-index

94
g-index

120
ext. papers

9,920
ext. citations

3.8
avg. IF

5.6
L-index

#	Paper	IF	Citations
114	The Cauchy-Lagrange method for 3D-axisymmetric wall-bounded and potentially singular incompressible Euler flows. <i>Journal of Computational Physics</i> , 2022 , 449, 110758	4.1	1
113	Unveiling the singular dynamics in the cosmic large-scale structure. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2021 , 505, L90-L94	4.3	3
112	Suppressing thermalization and constructing weak solutions in truncated inviscid equations of hydrodynamics: Lessons from the Burgers equation. <i>Physical Review Research</i> , 2020 , 2,	3.9	7
111	A Constructive Approach to Regularity of Lagrangian Trajectories for Incompressible Euler Flow in a Bounded Domain. <i>Communications in Mathematical Physics</i> , 2017 , 351, 689-707	2	6
110	Geometric formulation of the Cauchy invariants for incompressible Euler flow in flat and curved spaces. <i>Journal of Fluid Mechanics</i> , 2017 , 825, 412-478	3.7	26
109	A contemporary look at Hermann Hankel's 1861 pioneering work on Lagrangian fluid dynamics. <i>European Physical Journal H</i> , 2017 , 42, 537-556	0.9	5
108	Shell-crossing in quasi-one-dimensional flow. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017 , 471, 671-679	4.3	17
107	Intermittency in fractal Fourier hydrodynamics: Lessons from the Burgers equation. <i>Physical Review E</i> , 2016 , 93, 033109	2.4	16
106	The Cauchy-Lagrangian method for numerical analysis of Euler flow. <i>Journal of Computational Physics</i> , 2016 , 306, 320-342	4.1	15
105	The collective birth of multifractals. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016 , 49, 451002	2	5
104	How smooth are particle trajectories in a Λ CDM Universe?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015 , 452, 1421-1436	4.3	21
103	A Very Smooth Ride in a Rough Sea. <i>Communications in Mathematical Physics</i> , 2014 , 326, 499-505	2	17
102	Time-analyticity of Lagrangian particle trajectories in ideal fluid flow. <i>Journal of Fluid Mechanics</i> , 2014 , 749, 404-430	3.7	43
101	Cauchy's almost forgotten Lagrangian formulation of the Euler equation for 3D incompressible flow. <i>European Physical Journal H</i> , 2014 , 39, 325-351	0.9	45
100	Real-space manifestations of bottlenecks in turbulence spectra. <i>Physical Review Letters</i> , 2013 , 110, 064501	4.1	17
99	Turbulence in noninteger dimensions by fractal Fourier decimation. <i>Physical Review Letters</i> , 2012 , 108, 074501	7.4	42
98	Nelkin scaling for the Burgers equation and the role of high-precision calculations. <i>Physical Review E</i> , 2012 , 85, 015301	2.4	8

97	Resonance phenomenon for the Galerkin-truncated Burgers and Euler equations. <i>Physical Review E</i> , 2011 , 84, 016301	2.4	33
96	Extended self-similarity works for the Burgers equation and why. <i>Journal of Fluid Mechanics</i> , 2010 , 649, 275-285	3.7	31
95	Entire Solutions of Hydrodynamical Equations with Exponential Dissipation. <i>Communications in Mathematical Physics</i> , 2010 , 293, 519-543	2	11
94	The Monge-Ampère equation: Various forms and numerical solution. <i>Journal of Computational Physics</i> , 2010 , 229, 5043-5061	4.1	15
93	Hyperviscosity, Galerkin truncation, and bottlenecks in turbulence. <i>Physical Review Letters</i> , 2008 , 101, 144501	7.4	128
92	From Newton's mechanics to Euler's equations. <i>Physica D: Nonlinear Phenomena</i> , 2008 , 237, 1855-1869	3.3	12
91	Complex-space singularities of 2D Euler flow in Lagrangian coordinates. <i>Physica D: Nonlinear Phenomena</i> , 2008 , 237, 1951-1955	3.3	11
90	Genesis of d'Alembert's paradox and analytical elaboration of the drag problem. <i>Physica D: Nonlinear Phenomena</i> , 2008 , 237, 1878-1886	3.3	13
89	A Borel Transform Method for Locating Singularities of Taylor and Fourier Series. <i>Journal of Statistical Physics</i> , 2007 , 127, 1095-1119	1.5	20
88	Nature of complex singularities for the 2D Euler equation. <i>Physica D: Nonlinear Phenomena</i> , 2006 , 219, 40-59	3.3	30
87	Application of Optimal Transport Theory to Reconstruction of the Early Universe. <i>Journal of Mathematical Sciences</i> , 2006 , 133, 1539-1542	0.4	4
86	Does multifractal theory of turbulence have logarithms in the scaling relations?. <i>Journal of Fluid Mechanics</i> , 2005 , 542, 97	3.7	11
85	The analytic structure of 2D Euler flow at short times. <i>Fluid Dynamics Research</i> , 2005 , 36, 221-237	1.2	20
84	Multifractality of the Feigenbaum Attractor and Fractional Derivatives. <i>Journal of Statistical Physics</i> , 2005 , 121, 671-695	1.5	1
83	Is multiscaling an artifact in the stochastically forced Burgers equation?. <i>Physical Review Letters</i> , 2005 , 94, 194501	7.4	47
82	Book Review of Magnetohydrodynamic Turbulence, by Dieter Biskamp, Cambridge University Press, 2003, XII+297 pp., £65.00, \$95, hardback (ISBN 0-521-81011-6).. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2004 , 98, 173-174	1.4	
81	Singularities of Euler Flow? Not Out of the Blue!. <i>Journal of Statistical Physics</i> , 2003 , 113, 761-781	1.5	49
80	Reconstruction of the early Universe as a convex optimization problem. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003 , 346, 501-524	4.3	90

79	A reconstruction of the initial conditions of the universe by optimal mass transportation. <i>Nature</i> , 2002 , 417, 260-2	50.4	101
78	On Multifractality and Fractional Derivatives. <i>Journal of Statistical Physics</i> , 2002 , 108, 1181-1202	1.5	4
77	Universal decay of scalar turbulence. <i>Physical Review Letters</i> , 2001 , 86, 2305-8	7.4	19
76	Dynamo effect in parity-invariant flow with large and moderate separation of scales. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2001 , 95, 227-268	1.4	27
75	Kicked Burgers turbulence. <i>Journal of Fluid Mechanics</i> , 2000 , 416, 239-267	3.7	37
74	Probability distribution functions of derivatives and increments for decaying burgers turbulence. <i>Physical Review E</i> , 2000 , 61, 1395-402	2.4	18
73	Dispersive Stabilization of the Inverse Cascade for the Kolmogorov Flow. <i>Physical Review Letters</i> , 1999 , 82, 4440-4443	7.4	19
72	Intermittency in Passive Scalar Advection. <i>Physical Review Letters</i> , 1998 , 80, 5532-5535	7.4	99
71	Asymptotic Solutions to Dynamics of Many-Body Systems and Classical Continuum Equations. <i>Current Developments in Mathematics</i> , 1998 , 1998, 155-236	0	3
70	Transverse velocity increments in turbulent flow using the RELIEF technique. <i>Journal of Fluid Mechanics</i> , 1997 , 339, 287-307	3.7	170
69	On the decay of Burgers turbulence. <i>Journal of Fluid Mechanics</i> , 1997 , 344, 339-374	3.7	96
68	Bifractality of the devil's staircase appearing in the burgers equation with brownian initial velocity. <i>Journal of Statistical Physics</i> , 1997 , 88, 1151-1164	1.5	12
67	Is there finite-time blow-up in 3-D Euler flow?. <i>Current Developments in Mathematics</i> , 1997 , 1997, 193-195		3
66	Extreme Deviations and Applications. <i>Journal De Physique, I</i> , 1997 , 7, 1155-1171		99
65	Inertial-diffusive range for a passive scalar advected by a white-in-time velocity field. <i>Europhysics Letters</i> , 1996 , 35, 683-688	1.6	8
64	Large-scale Kolmogorov flow on the beta-plane and resonant wave interactions. <i>Physica D: Nonlinear Phenomena</i> , 1996 , 94, 36-56	3.3	23
63	The two-dimensional Navier-Stokes-Kuramoto-Sivashinsky equation on the Connection Machine. <i>Computing Systems in Engineering: an International Journal</i> , 1995 , 6, 325-329		1
62	Eddy viscosity of three-dimensional flow. <i>Journal of Fluid Mechanics</i> , 1995 , 288, 249-264	3.7	18

61	Chaotic cascades with Kolmogorov 1941 scaling. <i>Journal of Statistical Physics</i> , 1994 , 75, 781-795	1.5	11
60	Negative eddy viscosity in isotropically forced two-dimensional flow: linear and nonlinear dynamics. <i>Journal of Fluid Mechanics</i> , 1994 , 260, 95-126	3.7	77
59	Further results on multifractality in shell models. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993 , 5, 2533-2538		96
58	Wavelet analysis of the standard map: Structure and scaling. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1993 , 56, 263-272	1.4	
57	On the multifractal properties of the energy dissipation derived from turbulence data. <i>Journal of Fluid Mechanics</i> , 1992 , 238, 467-486	3.7	63
56	The inviscid Burgers equation with initial data of Brownian type. <i>Communications in Mathematical Physics</i> , 1992 , 148, 623-641	2	145
55	Wavelet transforms of self-similar processes. <i>Physica D: Nonlinear Phenomena</i> , 1991 , 54, 58-64	3.3	43
54	On the probability density function of velocity gradients in fully developed turbulence. <i>Fluid Dynamics Research</i> , 1991 , 8, 139-142	1.2	20
53	The two-dimensional Navier-Stokes equations with a large-scale instability of the Kuramoto-Sivashinsky type: Numerical exploration on the Connection Machine. <i>Journal of Scientific Computing</i> , 1991 , 6, 425-452	2.3	16
52	Relation between the lattice Boltzmann equation and the Navier-stokes equations. <i>Physica D: Nonlinear Phenomena</i> , 1991 , 47, 231-232	3.3	33
51	Eddy viscosity of parity-invariant flow. <i>Physical Review A</i> , 1991 , 43, 5355-5364	2.6	96
50	Low-viscosity lattice gases. <i>Journal of Statistical Physics</i> , 1990 , 59, 1187-1226	1.5	34
49	Report on workshop on small-diffusivity dynamos and dynamical systems. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1990 , 52, 263-270	1.4	8
48	Turbulence: Challenges for Theory and Experiment. <i>Physics Today</i> , 1990 , 43, 24-32	0.9	109
47	Lattice gas automata for the Navier-Stokes equations. a new approach to hydrodynamics and turbulence. <i>Physica Scripta</i> , 1989 , 40, 423-423	2.6	2
46	Wavelet analysis of turbulence reveals the multifractal nature of the Richardson cascade. <i>Nature</i> , 1989 , 338, 51-53	50.4	178
45	Generation of large-scale structures in threedimensional flow lacking parity-invariance. <i>Journal of Fluid Mechanics</i> , 1989 , 205, 341	3.7	50
44	A new large-scale instability in three-dimensional incompressible flows lacking parity-invariance. <i>Fluid Dynamics Research</i> , 1988 , 3, 295-298	1.2	6

43	Helicity is unnecessary for alpha effect dynamos, but it helps. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1988 , 42, 151-161	1.4	43
42	Simulating Fully Three-Dimensional External Flow by Lattice Gas Methods. <i>Europhysics Letters</i> , 1988 , 7, 231-236	1.6	49
41	A note on the stability of a family of space-periodic Beltrami flows. <i>Journal of Fluid Mechanics</i> , 1987 , 180, 557	3.7	66
40	Large-scale flow driven by the anisotropic kinetic alpha effect. <i>Physica D: Nonlinear Phenomena</i> , 1987 , 28, 382-392	3.3	138
39	Dynamo action in a family of flows with chaotic streamlines. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1986 , 36, 53-83	1.4	161
38	Growth of correlations in magnetohydrodynamic turbulence. <i>Physical Review A</i> , 1986 , 33, 4266-4276	2.6	95
37	Lattice Gas Models for 3D Hydrodynamics. <i>Europhysics Letters</i> , 1986 , 2, 291-297	1.6	254
36	Viscoelastic behaviour of cellular solutions to the Kuramoto-Sivashinsky model. <i>Journal of Fluid Mechanics</i> , 1986 , 168, 221	3.7	130
35	Chaotic streamlines in the ABC flows. <i>Journal of Fluid Mechanics</i> , 1986 , 167, 353	3.7	546
34	On the exponential flattening of current sheets near neutral X-points in two-dimensional ideal MHD flow. <i>Journal of Plasma Physics</i> , 1985 , 33, 191-198	2.7	33
33	Backscattering and localization of high-frequency waves in a one-dimensional random medium. <i>Journal of Mathematical Physics</i> , 1984 , 25, 1378-1381	1.2	6
32	A numerical investigation of magnetic field generation in a flow with chaotic streamlines. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1984 , 29, 13-18	1.4	59
31	The Taylor-Green vortex and fully developed turbulence. <i>Journal of Statistical Physics</i> , 1984 , 34, 1049-1063	3.7	20
30	Numerical simulation of the inverse cascade in two-dimensional turbulence. <i>Physics of Fluids</i> , 1984 , 27, 1921		129
29	Small-scale structure of the Taylor-Green vortex. <i>Journal of Fluid Mechanics</i> , 1983 , 130, 411	3.7	551
28	Turbulence with a spectral gap. <i>Physics of Fluids</i> , 1983 , 26, 877		23
27	Remarks on the renormalization group in statistical fluid dynamics. <i>Physical Review A</i> , 1983 , 28, 1000-1002	2.6	112
26	A method of cauchy integral equation for non-coherent transfer in half-space. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1982 , 28, 361-375	2.1	12

25	Fully developed MHD turbulence near critical magnetic Reynolds number. <i>Journal of Fluid Mechanics</i> , 1981 , 104, 419-443	3.7	66
24	Finite time analyticity for the two and three dimensional Kelvin-Helmholtz instability. <i>Communications in Mathematical Physics</i> , 1981 , 80, 485-516	2	97
23	Helical and Nonhelical Turbulent Dynamos. <i>Physical Review Letters</i> , 1981 , 47, 1060-1064	7.4	288
22	Intermittency in nonlinear dynamics and singularities at complex times. <i>Physical Review A</i> , 1981 , 23, 2673-2705	3.7	190
21	Spontaneous Singularity in Three-Dimensional Inviscid, Incompressible Flow. <i>Physical Review Letters</i> , 1980 , 44, 572-575	7.4	91
20	Comments on the quasi-normal Markovian approximation for fully-developed turbulence. <i>Journal of Fluid Mechanics</i> , 1980 , 97, 181	3.7	16
19	Modified dissipativity for a non-linear evolution equation arising in turbulence. <i>Archive for Rational Mechanics and Analysis</i> , 1979 , 71, 237-256	2.3	41
18	d-dimensional turbulence. <i>Physical Review A</i> , 1978 , 17, 747-762	2.6	142
17	A simple dynamical model of intermittent fully developed turbulence. <i>Journal of Fluid Mechanics</i> , 1978 , 87, 719	3.7	845
16	Renormalization-group approach to noncoherent radiative transfer. <i>Physical Review A</i> , 1978 , 17, 1049-1058	2.6	10
15	Non-LTE transfer - III. Asymptotic expansion for small λ . <i>Monthly Notices of the Royal Astronomical Society</i> , 1977 , 181, 273-280	4.3	8
14	Strong MHD helical turbulence and the nonlinear dynamo effect. <i>Journal of Fluid Mechanics</i> , 1976 , 77, 321-354	3.7	805
13	Crossover Dimensions for Fully Developed Turbulence. <i>Physical Review Letters</i> , 1976 , 37, 895-897	7.4	30
12	Non-Lte Transfer -- II TWO-LEVEL ATOMS WITH STOCHASTIC VELOCITY FIELD. <i>Monthly Notices of the Royal Astronomical Society</i> , 1976 , 175, 157-175	4.3	20
11	Non-Lte Transfer. Revisited. <i>Monthly Notices of the Royal Astronomical Society</i> , 1975 , 173, 167-182	4.3	34
10	Bounds on energy flux for finite energy turbulence. <i>Journal of Fluid Mechanics</i> , 1975 , 72, 417	3.7	34
9	Possibility of an inverse cascade of magnetic helicity in magnetohydrodynamic turbulence. <i>Journal of Fluid Mechanics</i> , 1975 , 68, 769-778	3.7	419
8	A Markovian random coupling model for turbulence. <i>Journal of Fluid Mechanics</i> , 1974 , 65, 145-152	3.7	50

7	Solving linear stochastic differential equations. <i>Journal of Mathematical Physics</i> , 1974 , 15, 524-534	1.2	222
6	Brownian motion of harmonic oscillator with stochastic frequency. <i>Physica</i> , 1973 , 65, 303-320		154
5	Stochastic Resonance in One-Dimensional Random Media. <i>Physical Review A</i> , 1973 , 8, 1416-1421	2.6	36
4	Total reflection of a plane wave by a semi-infinite random medium □ <i>Journal of Plasma Physics</i> , 1972 , 8, 217-229	2.7	24
3	Theory of Stark broadening □ soluble scalar model as a test. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1971 , 11, 1753-1766	2.1	66
2	Theory of Stark broadening □ exact line profile with model microfield. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1971 , 11, 1767-1783	2.1	166
1	Parastochastics. <i>Journal of Mathematical Physics</i> , 1970 , 11, 364-390	1.2	60