

Daniel P Lathrop

List of Publications by Year in descending order

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75
papers

3,811
citations

126907

33
h-index

123424

61
g-index

78
all docs

78
docs citations

78
times ranked

2287
citing authors

#	ARTICLE	IF	CITATIONS
1	Visualization of quantized vortices. <i>Nature</i> , 2006, 441, 588-588.	27.8	322
2	Characterization of an experimental strange attractor by periodic orbits. <i>Physical Review A</i> , 1989, 40, 4028-4031.	2.5	301
3	Transition to shear-driven turbulence in Couette-Taylor flow. <i>Physical Review A</i> , 1992, 46, 6390-6405.	2.5	213
4	Singularity dynamics in curvature collapse and jet eruption on a fluid surface. <i>Nature</i> , 2000, 403, 401-404.	27.8	210
5	Experimental Observation and Characterization of the Magnetorotational Instability. <i>Physical Review Letters</i> , 2004, 93, 114502.	7.8	198
6	Characterization of reconnecting vortices in superfluid helium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 13707-13710.	7.1	184
7	Velocity Statistics Distinguish Quantum Turbulence from Classical Turbulence. <i>Physical Review Letters</i> , 2008, 101, 154501.	7.8	174
8	Turbulent flow between concentric rotating cylinders at large Reynolds number. <i>Physical Review Letters</i> , 1992, 68, 1515-1518.	7.8	143
9	Measuring intense rotation and dissipation in turbulent flows. <i>Nature</i> , 2003, 421, 146-149.	27.8	140
10	Direct observation of Kelvin waves excited by quantized vortex reconnection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 4707-4710.	7.1	125
11	Visualization of two-fluid flows of superfluid helium-4. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 4653-4658.	7.1	95
12	Drag Reduction in Bubbly Taylor-Couette Turbulence. <i>Physical Review Letters</i> , 2005, 94, 044501.	7.8	87
13	Toward a self-generating magnetic dynamo: The role of turbulence. <i>Physical Review E</i> , 2000, 61, 5287-5294.	2.1	76
14	Visualization of Superfluid Helium Flow. <i>Journal of the Physical Society of Japan</i> , 2008, 77, 111007.	1.6	75
15	Reconnection dynamics for quantized vortices. <i>Physica D: Nonlinear Phenomena</i> , 2010, 239, 1367-1377.	2.8	74
16	Viscous effects in droplet-ejecting capillary waves. <i>Physical Review E</i> , 1997, 56, 472-475.	2.1	73
17	Boolean chaos. <i>Physical Review E</i> , 2009, 80, 045202.	2.1	72
18	Quantum Turbulence. <i>Annual Review of Condensed Matter Physics</i> , 2011, 2, 213-234.	14.5	71

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19	Threshold Dynamics of Singular Gravity-Capillary Waves. <i>Physical Review Letters</i> , 1996, 76, 1824-1827.	7.8	70
20	Synthetic turbulence. <i>Physical Review E</i> , 1994, 49, 5179-5194.	2.1	62
21	Inertial waves driven by differential rotation in a planetary geometry. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2007, 101, 469-487.	1.2	62
22	Magnetic dynamos in the lab. <i>Physics Today</i> , 2011, 64, 40-45.	0.3	61
23	The Twente turbulent Taylor-Couette (T3C) facility: Strongly turbulent (multiphase) flow between two independently rotating cylinders. <i>Review of Scientific Instruments</i> , 2011, 82, 025105.	1.3	59
24	Bubbly Turbulent Drag Reduction Is a Boundary Layer Effect. <i>Physical Review Letters</i> , 2007, 98, 084501.	7.8	51
25	Pattern formation in a monolayer of magnetic spheres. <i>Physical Review E</i> , 2003, 68, 026207.	2.1	45
26	Breaking Faraday Waves: Critical Slowing of Droplet Ejection Rates. <i>Physical Review Letters</i> , 1999, 82, 3062-3065.	7.8	44
27	Generalized Synchronization of Spatiotemporal Chaos in a Liquid Crystal Spatial Light Modulator. <i>Physical Review Letters</i> , 2004, 93, 084101.	7.8	44
28	Inertial waves in rotating grid turbulence. <i>Physics of Fluids</i> , 2007, 19, 071701.	4.0	43
29	Particles for tracing turbulent liquid helium. <i>Experiments in Fluids</i> , 2008, 44, 887-896.	2.4	41
30	Smooth and rough boundaries in turbulent Taylor-Couette flow. <i>Physical Review E</i> , 2003, 68, 036307.	2.1	39
31	Blowout bifurcations and the onset of magnetic activity in turbulent dynamos. <i>Physical Review E</i> , 2001, 63, 066211.	2.1	37
32	A turbulent, high magnetic Reynolds number experimental model of Earth's core. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 4538-4557.	3.4	37
33	True random number generation using CMOS Boolean chaotic oscillator. <i>Microelectronics Journal</i> , 2015, 46, 1364-1370.	2.0	36
34	Liquid sodium model of geophysical core convection. <i>Physics of the Earth and Planetary Interiors</i> , 2005, 153, 136-149.	1.9	30
35	Power-law singularities in gravity-capillary waves. <i>Physica D: Nonlinear Phenomena</i> , 1998, 123, 183-205.	2.8	29
36	Excitation of inertial modes in an experimental spherical Couette flow. <i>Physical Review E</i> , 2012, 86, 026304.	2.1	28

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37	Reconnection scaling in quantum fluids. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1924-1928.	7.1	25
38	Selection of inertial modes in spherical Couette flow. Physical Review E, 2010, 81, 026311.	2.1	24
39	Blowout bifurcations and the onset of magnetic dynamo action. Physics of Plasmas, 2001, 8, 1944-1952.	1.9	22
40	Lorentz force effects in magneto-turbulence. Physics of the Earth and Planetary Interiors, 2003, 135, 137-159.	1.9	22
41	Sub-micron solid air tracers for quantum vortices and liquid helium flows. Review of Scientific Instruments, 2016, 87, 025106.	1.3	20
42	Turbulence and Wave Breaking Effects on Air-Water Gas Exchange. Physical Review Letters, 2000, 85, 2030-2033.	7.8	19
43	Hysteretic gravity-wave bifurcation in a highly turbulent swirling flow. Journal of Fluid Mechanics, 2006, 551, 49.	3.4	19
44	Suppression of sodium fires with liquid nitrogen. Fire Safety Journal, 2013, 58, 204-207.	3.1	19
45	Three-dimensional optical billiard chaotic scattering. Physica D: Nonlinear Phenomena, 2001, 154, 207-218.	2.8	18
46	Characterization of experimental dynamos. Geophysical Journal International, 2000, 142, 52-58.	2.4	17
47	Nanoparticle dispersion in superfluid helium. Review of Scientific Instruments, 2014, 85, 073705.	1.3	16
48	Laboratory experiments on the transition to MHD dynamos. Plasma Physics and Controlled Fusion, 2001, 43, A151-A160.	2.1	15
49	Azimuthal velocity profiles in Rayleigh-stable Taylor-Couette flow and implied axial angular momentum transport. Journal of Fluid Mechanics, 2015, 774, 342-362.	3.4	13
50	Fluid Dynamics Experiments for Planetary Interiors. Surveys in Geophysics, 2022, 43, 229-261.	4.6	13
51	Liquid nitrogen in fluid dynamics: Visualization and velocimetry using frozen particles. Review of Scientific Instruments, 2012, 83, 085101.	1.3	11
52	Liquid sodium models of the Earth's core. Progress in Earth and Planetary Science, 2015, 2, .	3.0	10
53	Breaking waves: Bifurcations leading to a singular wave state. Physical Review E, 1997, 56, 4157-4161.	2.1	8
54	Dynamics of a piecewise smooth map with singularity. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 337, 87-92.	2.1	7

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55	Driven inertial waves in spherical Couette flow. Chaos, 2006, 16, 041105.	2.5	7
56	The impact of a deep-water plunging breaker on a wall with its bottom edge close to the mean water surface. Journal of Fluid Mechanics, 2018, 843, 680-721.	3.4	7
57	Dynamics of analog logic-gate networks for machine learning. Chaos, 2019, 29, 123130.	2.5	7
58	Visualizing the invisible: Ultrasound velocimetry in liquid sodium. Chaos, 2005, 15, 041104.	2.5	6
59	Helioseismology in a bottle: modal acoustic velocimetry. New Journal of Physics, 2014, 16, 113005.	2.9	6
60	Bistability and hysteresis in a highly turbulent swirling flow. Physica A: Statistical Mechanics and Its Applications, 2005, 356, 162-166.	2.6	5
61	Chaotic Oscillations in a CMOS Inverter Coupled With ESD Protection Circuits Under Radio Wave Excitation. IEEE Transactions on Electromagnetic Compatibility, 2014, 56, 530-538.	2.2	4
62	RF Signal Classification using Boolean Reservoir Computing on an FPGA. , 2021, , .		4
63	Characterizing intense rotation and dissipation in turbulent flows. Chaos, 2004, 14, S8-S8.	2.5	3
64	Turbulence lost in transience. Nature, 2006, 443, 36-37.	27.8	3
65	Experimental study of rough spherical Couette flows: Increasing helicity toward a dynamo state. Physical Review Fluids, 2021, 6, .	2.5	3
66	Liquid metal flow encasing a magnetic cavity. Physics of Plasmas, 2000, 7, 1081-1084.	1.9	2
67	Early geodynamo work. Physics Today, 2006, 59, 15-15.	0.3	2
68	Making a supersonic jet in your kitchen. Physics Magazine, 2010, 3, .	0.1	1
69	Characterization of the magnetorotational instability from a turbulent background state. AIP Conference Proceedings, 2004, , .	0.4	0
70	Introduction: Third Annual Gallery of Nonlinear Images (Baltimore, Maryland, 2006). Chaos, 2006, 16, 041101.	2.5	0
71	Source of chaos in radio frequency MOSFETs. , 2011, , .		0
72	Modeling chaos in on-chip ultra-wideband chaotic oscillator. , 2012, , .		0

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73	Lord Kelvin's vortex rings. Nature Physics, 2013, 9, 207-208.	16.7	0
74	Vortex Creation in Quantum Fluid Phase Transitions: An Experimental Perspective. , 2017, , 71-79.		0
75	Bubbly drag reduction in turbulent Taylor-Couette flow. Springer Proceedings in Physics, 2007, , 416-417.	0.2	0