

Eric Falcon

List of Publications by Year in descending order

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93
papers

2,760
citations

186265

28
h-index

189892

50
g-index

93
all docs

93
docs citations

93
times ranked

1488
citing authors

#	ARTICLE	IF	CITATIONS
1	Solitary waves in a chain of beads under Hertz contact. <i>Physical Review E</i> , 1997, 56, 6104-6117.	2.1	426
2	Cluster Formation in a Granular Medium Fluidized by Vibrations in Low Gravity. <i>Physical Review Letters</i> , 1999, 83, 440-443.	7.8	163
3	Behavior of one inelastic ball bouncing repeatedly off the ground. <i>European Physical Journal B</i> , 1998, 3, 45-57.	1.5	146
4	Observation of Gravity-Capillary Wave Turbulence. <i>Physical Review Letters</i> , 2007, 98, 094503.	7.8	138
5	Observation of Depression Solitary Surface Waves on a Thin Fluid Layer. <i>Physical Review Letters</i> , 2002, 89, 204501.	7.8	83
6	Cluster formation, pressure and density measurements in a granular medium fluidized by vibrations. <i>European Physical Journal B</i> , 1999, 9, 183-186.	1.5	79
7	Simulations of vibrated granular medium with impact-velocity-dependent restitution coefficient. <i>Physical Review E</i> , 2005, 71, 031302.	2.1	73
8	Observation of Intermittency in Wave Turbulence. <i>Physical Review Letters</i> , 2007, 98, 154501.	7.8	72
9	Collision of a 1-D column of beads with a wall. <i>European Physical Journal B</i> , 1998, 5, 111-131.	1.5	68
10	Capillary wave turbulence on a spherical fluid surface in low gravity. <i>Europhysics Letters</i> , 2009, 86, 14002.	2.0	58
11	Fluctuations of Energy Flux in Wave Turbulence. <i>Physical Review Letters</i> , 2008, 100, 064503.	7.8	56
12	Nonlinear Spectral Synthesis of Soliton Gas in Deep-Water Surface Gravity Waves. <i>Physical Review Letters</i> , 2020, 125, 264101.	7.8	50
13	Direct Numerical Simulations of Capillary Wave Turbulence. <i>Physical Review Letters</i> , 2014, 112, 234501.	7.8	46
14	Observation of the Nonlinear Dispersion Relation and Spatial Statistics of Wave Turbulence on the Surface of a Fluid. <i>Physical Review Letters</i> , 2010, 105, 144502.	7.8	44
15	Decay of capillary wave turbulence. <i>Physical Review E</i> , 2012, 85, 066311.	2.1	42
16	Electrical conductivity in granular media and Branly's coherer: A simple experiment. <i>American Journal of Physics</i> , 2005, 73, 302-307.	0.7	41
17	Experiments in Surface Gravity's Capillary Wave Turbulence. <i>Annual Review of Fluid Mechanics</i> , 2022, 54, 1-25.	25.0	41
18	Collision statistics in a dilute granular gas fluidized by vibrations in low gravity. <i>Europhysics Letters</i> , 2006, 74, 830-836.	2.0	39

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19	Instability of the Origami of a Ferrofluid Drop in a Magnetic Field. <i>Physical Review Letters</i> , 2011, 107, 204503.	7.8	39
20	Observation of near-critical reflection of internal waves in a stably stratified fluid. <i>Physics of Fluids</i> , 2004, 16, 1936-1941.	4.0	38
21	Nonlinear electrical conductivity in a 1D granular medium. <i>European Physical Journal B</i> , 2004, 38, 475-483.	1.5	38
22	Laboratory experiments on wave turbulence. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2010, 13, 819-840.	0.9	37
23	Role of the basin boundary conditions in gravity wave turbulence. <i>Journal of Fluid Mechanics</i> , 2015, 781, 196-225.	3.4	36
24	Energy flux measurement from the dissipated energy in capillary wave turbulence. <i>Physical Review E</i> , 2014, 89, 023003.	2.1	35
25	Space-time-resolved capillary wave turbulence. <i>Physical Review E</i> , 2013, 87, .	2.1	33
26	Heap corrugation and hexagon formation of powder under vertical vibrations. <i>Physical Review E</i> , 1999, 59, 5716-5720.	2.1	29
27	Wave Turbulence on the Surface of a Ferrofluid in a Magnetic Field. <i>Physical Review Letters</i> , 2008, 101, 244502.	7.8	29
28	Observation of resonant interactions among surface gravity waves. <i>Journal of Fluid Mechanics</i> , 2016, 805, .	3.4	29
29	Nonlinear waves on the surface of a fluid covered by an elastic sheet. <i>Journal of Fluid Mechanics</i> , 2013, 733, 394-413.	3.4	28
30	From modulational instability to focusing dam breaks in water waves. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	28
31	“Turbulent” electrical transport in copper powders. <i>Europhysics Letters</i> , 2004, 65, 186-192.	2.0	27
32	On the origin of intermittency in wave turbulence. <i>Europhysics Letters</i> , 2010, 90, 34005.	2.0	24
33	Experimental study of three-wave interactions among capillary-gravity surface waves. <i>Physical Review E</i> , 2016, 93, 043110.	2.1	24
34	Coexistence of solitons and extreme events in deep water surface waves. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	24
35	Observation of Sommerfeld Precursors on a Fluid Surface. <i>Physical Review Letters</i> , 2003, 91, 064502.	7.8	22
36	Observation of Axisymmetric Solitary Waves on the Surface of a Ferrofluid. <i>Physical Review Letters</i> , 2010, 104, 094502.	7.8	22

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37	Equation of state of a granular gas homogeneously driven by particle rotations. Europhysics Letters, 2013, 103, 64004.	2.0	22
38	Wave turbulence on the surface of a ferrofluid in a horizontal magnetic field. Physical Review E, 2011, 83, 046303.	2.1	21
39	Segregation and pattern formation in dilute granular media under microgravity conditions. Npj Microgravity, 2017, 3, 1.	3.7	21
40	An instrument for studying granular media in low-gravity environment. Review of Scientific Instruments, 2018, 89, 075103.	1.3	18
41	Transition from a dissipative to a quasi-elastic system of particles with tunable repulsive interactions. Europhysics Letters, 2014, 106, 44005.	2.0	18
42	Some aspects of electrical conduction in granular systems of various dimensions. European Physical Journal E, 2007, 23, 255-64.	1.6	17
43	Fluctuations of energy flux in a simple dissipative out-of-equilibrium system. Physical Review E, 2009, 79, 041110.	2.1	16
44	Wave turbulence in a two-layer fluid: Coupling between free surface and interface waves. Europhysics Letters, 2016, 116, 64005.	2.0	16
45	Threshold of gas-like to clustering transition in driven granular media in low-gravity environment. Europhysics Letters, 2018, 123, 14003.	2.0	16
46	Scaling of ac electrical conductivity of powders under compression. Physical Review B, 2008, 77, .	3.2	15
47	Experimental observation of hydroelastic three-wave interactions. Physical Review Fluids, 2017, 2, .	2.5	15
48	Emergence of Peregrine solitons in integrable turbulence of deep water gravity waves. Physical Review Fluids, 2020, 5, .	2.5	15
49	Shape of convective cell in Faraday experiment with fine granular materials. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 97-104.	2.6	14
50	Simulations of dense granular gases without gravity with impact-velocity-dependent restitution coefficient. Powder Technology, 2008, 182, 232-240.	4.2	14
51	An inertial tribometer for measuring microslip dissipation at a solid-solid multicontact interface. Review of Scientific Instruments, 1998, 69, 2416-2420.	1.3	13
52	Revealing intermittency in experimental data with steep power spectra. Europhysics Letters, 2010, 90, 50007.	2.0	13
53	Experiments on generation of surface waves by an underwater moving bottom. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150069.	2.1	13
54	Tuning the resonant frequencies of a drop by a magnetic field. Physical Review Fluids, 2016, 1, .	2.5	13

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55	Prediction and manipulation of hydrodynamic rogue waves via nonlinear spectral engineering. <i>Physical Review Fluids</i> , 2022, 7, .	2.5	13
56	Experimental study of the inverse cascade in gravity wave turbulence. <i>Europhysics Letters</i> , 2011, 96, 34004.	2.0	12
57	Experimental quasi-1D capillary-wave turbulence. <i>Europhysics Letters</i> , 2021, 135, 64001.	2.0	12
58	Parametric stabilization of the Rosensweig instability. <i>European Physical Journal B</i> , 2000, 15, 3-6.	1.5	11
59	Observation of depth-induced properties in wave turbulence on the surface of a fluid. <i>Europhysics Letters</i> , 2011, 95, 34003.	2.0	11
60	Turbulence of capillary waves forced by steep gravity waves. <i>Journal of Fluid Mechanics</i> , 2018, 850, 803-843.	3.4	11
61	Particle Dynamics at the Onset of the Granular Gas-Liquid Transition. <i>Physical Review Letters</i> , 2021, 126, 128002.	7.8	11
62	Microgravity experiments on vibrated granular gases in a dilute regime: non-classical statistics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2006, 2006, P07012-P07012.	2.3	10
63	Gravity wave turbulence revealed by horizontal vibrations of the container. <i>Physical Review E</i> , 2013, 87, 011001.	2.1	10
64	Saturation of the Inverse Cascade in Surface Gravity-Wave Turbulence. <i>Physical Review Letters</i> , 2020, 125, 134501.	7.8	10
65	Forced three-wave interactions of capillary-gravity surface waves. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	10
66	Numerical Simulation of Collinear Capillary-Wave Turbulence. <i>JETP Letters</i> , 2020, 112, 757-763.	1.4	10
67	Dissipated power within a turbulent flow forced homogeneously by magnetic particles. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	9
68	Two-Dimensional Melting of a Crystal of Ferrofluid Spikes. <i>Physical Review Letters</i> , 2009, 103, 144501.	7.8	8
69	Transition to a labyrinthine phase in a driven granular medium. <i>Physical Review E</i> , 2015, 92, 062205.	2.1	8
70	Pressure dependence of the electrical transport in granular materials. <i>European Physical Journal E</i> , 2017, 40, 56.	1.6	8
71	Capillary wave turbulence experiments in microgravity. <i>Europhysics Letters</i> , 2019, 128, 34001.	2.0	8
72	Self-similar gravity wave spectra resulting from the modulation of bound waves. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	8

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73	Effects of electromagnetic waves on the electrical properties of contacts between grains. Europhysics Letters, 2007, 79, 54001.	2.0	7
74	Wave Turbulence on the Surface of a Fluid in a High-Gravity Environment. Physical Review Letters, 2019, 123, 244501.	7.8	7
75	Experimental determination of a state equation for dissipative granular gases. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1999, 96, 1111-1116.	0.2	7
76	Patterns in magnetic granular media at the crossover from two to three dimensions. Physical Review E, 2020, 102, 042907.	2.1	6
77	Experimental Dispersion Relation of Surface Waves along a Torus of Fluid. Physical Review Letters, 2021, 127, 144504.	7.8	6
78	Experiment and Theory of the Electrical Conductivity of a Compressed Granular Metal. , 2009, , .		5
79	Statistics of injected power on a bouncing ball subjected to a randomly vibrating piston. Physical Review E, 2015, 92, 032915.	2.1	5
80	Observation of the Resonance Frequencies of a Stable Torus of Fluid. Physical Review Letters, 2019, 123, 094502.	7.8	5
81	Three-dimensional direct numerical simulation of free-surface magnetohydrodynamic wave turbulence. Physical Review E, 2022, 105, .	2.1	5
82	Experimental Study of a Granular Gas Fluidized by Vibrations. Lecture Notes in Physics, 2001, , 244-253.	0.7	4
83	Tuning the distance to equipartition by controlling the collision rate in a driven granular gas experiment. Physical Review E, 2020, 101, 032903.	2.1	3
84	Visual analysis of density and velocity profiles in dense 3D granular gases. Scientific Reports, 2021, 11, 10621.	3.3	3
85	Observation expérimentale en bassin à vagues des interactions résonantes à quatre ondes. Houille Blanche, 2017, 103, 56-63.	0.3	3
86	Three-dimensional turbulence generated homogeneously by magnetic particles. Physical Review Fluids, 2021, 6, .	2.5	3
87	Statistics of rogue waves in isotropic wave fields. Journal of Fluid Mechanics, 2022, 943, .	3.4	3
88	Nonlinear dispersion relation in integrable turbulence. Scientific Reports, 2022, 12, .	3.3	3
89	Vibrated Granular Media as Experimentally Realizable Granular Gases. Lecture Notes in Physics, 2003, , 347-366.	0.7	2
90	Wave Turbulence: A Set of Stochastic Nonlinear Waves in Interaction. Understanding Complex Systems, 2019, , 259-266.	0.6	2

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91	Wave spectroscopy in a driven granular material. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	2
92	Experimental study of a granular gas homogeneously driven by particle rotations. , 2013, , .		1
93	Fluctuations of the Energy Flux in Wave Turbulence. World Scientific Series on Nonlinear Science, Series A, 2013, , 53-72.	0.0	1