

Kristian Gustafsson

List of Publications by Year in descending order

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47
papers

1,426
citations

331259

21
h-index

329751

37
g-index

47
all docs

47
docs citations

47
times ranked

870
citing authors

#	ARTICLE	IF	CITATIONS
1	Machine learning for active matter. <i>Nature Machine Intelligence</i> , 2020, 2, 94-103.	8.3	164
2	Flow Navigation by Smart Microswimmers via Reinforcement Learning. <i>Physical Review Letters</i> , 2017, 118, 158004.	2.9	142
3	Statistical models for spatial patterns of heavy particles in turbulence. <i>Advances in Physics</i> , 2016, 65, 1-57.	35.9	114
4	Shape-dependence of particle rotation in isotropic turbulence. <i>Physics of Fluids</i> , 2015, 27, .	1.6	83
5	Tumbling of Small Axisymmetric Particles in Random and Turbulent Flows. <i>Physical Review Letters</i> , 2014, 112, 014501.	2.9	69
6	Zermelo's problem: Optimal point-to-point navigation in 2D turbulent flows using reinforcement learning. <i>Chaos</i> , 2019, 29, 103138.	1.0	68
7	Distribution of relative velocities in turbulent aerosols. <i>Physical Review E</i> , 2011, 84, 045304.	0.8	58
8	Preferential Sampling and Small-Scale Clustering of Gyrotactic Microswimmers in Turbulence. <i>Physical Review Letters</i> , 2016, 116, 108104.	2.9	49
9	Clustering of Particles Falling in a Turbulent Flow. <i>Physical Review Letters</i> , 2014, 112, .	2.9	48
10	Finding efficient swimming strategies in a three-dimensional chaotic flow by reinforcement learning. <i>European Physical Journal E</i> , 2017, 40, 110.	0.7	48
11	Inertial-particle dynamics in turbulent flows: caustics, concentration fluctuations and random uncorrelated motion. <i>New Journal of Physics</i> , 2012, 14, 115017.	1.2	47
12	Ergodic and non-ergodic clustering of inertial particles. <i>Europhysics Letters</i> , 2011, 96, 60012.	0.7	38
13	Relative velocities of inertial particles in turbulent aerosols. <i>Journal of Turbulence</i> , 2014, 15, 34-69.	0.5	36
14	Smart inertial particles. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	33
15	Statistical Model for the Orientation of Nonspherical Particles Settling in Turbulence. <i>Physical Review Letters</i> , 2017, 119, 254501.	2.9	30
16	Effect of fluid inertia on the orientation of a small prolate spheroid settling in turbulence. <i>New Journal of Physics</i> , 2019, 21, 083008.	1.2	30
17	Correlation dimension of inertial particles in random flows. <i>Europhysics Letters</i> , 2010, 89, 50002.	0.7	27
18	Alignment of Nonspherical Active Particles in Chaotic Flows. <i>Physical Review Letters</i> , 2019, 123, 138003.	2.9	27

#	ARTICLE	IF	CITATIONS
19	Importance of fluid inertia for the orientation of spheroids settling in turbulent flow. Journal of Fluid Mechanics, 2020, 886, .	1.4	27
20	Clustering of exponentially separating trajectories. European Physical Journal B, 2012, 85, 1.	0.6	24
21	Distribution of velocity gradients and rate of caustic formation in turbulent aerosols at finite Kubo numbers. Physical Review E, 2013, 87, 023016.	0.8	22
22	Navigation of micro-swimmers in steady flow: the importance of symmetries. Journal of Fluid Mechanics, 2022, 932, .	1.4	20
23	Statistics of the relative velocity of particles in turbulent flows: Monodisperse particles. Physical Review E, 2018, 97, 023105.	0.8	18
24	Variable-Range Projection Model for Turbulence-Driven Collisions. Physical Review Letters, 2008, 101, 174503.	2.9	16
25	Inertial torque on a small spheroid in a stationary uniform flow. Physical Review Fluids, 2021, 6, .	1.0	16
26	Relative velocities in bidisperse turbulent aerosols: Simulations and theory. Physical Review E, 2018, 98, .	0.8	14
27	Relative velocities in bidisperse turbulent suspensions. Physical Review E, 2017, 96, 061102.	0.8	13
28	Advective collisions. Europhysics Letters, 2007, 80, 69001.	0.7	12
29	Effect of Particle Inertia on the Alignment of Small Ice Crystals in Turbulent Clouds. Journals of the Atmospheric Sciences, 2021, 78, 2573-2587.	0.6	12
30	Analysis of the correlation dimension for inertial particles. Physics of Fluids, 2015, 27, .	1.6	11
31	Statistical model for collisions and recollisions of inertial particles in mixing flows. European Physical Journal E, 2016, 39, 55.	0.7	11
32	Preferential sampling of helicity by isotropic helicoids. Physical Review Fluids, 2016, 1, .	1.0	11
33	Passive directors in turbulence. Physical Review Fluids, 2019, 4, .	1.0	11
34	Collisions of particles advected in random flows. New Journal of Physics, 2008, 10, 075014.	1.2	10
35	Optimal Control of Point-to-Point Navigation in Turbulent Time Dependent Flows Using Reinforcement Learning. Lecture Notes in Computer Science, 2021, , 223-234.	1.0	10
36	Active gyrotactic stability of microswimmers using hydromechanical signals. Physical Review Fluids, 2022, 7, .	1.0	10

#	ARTICLE	IF	CITATIONS
37	Lyapunov Exponents for Particles Advected in Compressible Random Velocity Fields at Small and Large Kubo Numbers. <i>Journal of Statistical Physics</i> , 2013, 153, 813-827.	0.5	8
38	Paths to caustic formation in turbulent aerosols. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	7
39	Fractal catastrophes. <i>New Journal of Physics</i> , 2020, 22, 013033.	1.2	6
40	Inertial-particle accelerations in turbulence: a Lagrangian closure. <i>Journal of Fluid Mechanics</i> , 2016, 798, 187-200.	1.4	5
41	Helicoidal particles in turbulent flows with multi-scale helical injection. <i>Journal of Fluid Mechanics</i> , 2019, 869, 646-673.	1.4	5
42	Multiple regimes of diffusion. <i>Physical Review E</i> , 2009, 80, 011139.	0.8	4
43	Lord Kelvin's isotropic helicoid. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	3
44	Colliding Ice Crystals in Turbulent Clouds. <i>Journals of the Atmospheric Sciences</i> , 2022, 79, 2205-2218.	0.6	3
45	Bifurcations in droplet collisions. <i>Physical Review Fluids</i> , 2022, 7, .	1.0	3
46	Alignment of elongated swimmers in a laminar and turbulent Kolmogorov flow. <i>Physical Review Fluids</i> , 2022, 7, .	1.0	2
47	Fractal dimensions and trajectory crossings in correlated random walks. <i>Physical Review E</i> , 2018, 98, .	0.8	1