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	Navigation of micro-swimmers in steady flow: the importance of symmetries. Journal of Fluid Mechanics, 2022, 932, .	1.4	20
2	Active gyrotactic stability of microswimmers using hydromechanical signals. Physical Review Fluids, 2022, 7, .	1.0	10
3	Colliding Ice Crystals in Turbulent Clouds. Journals of the Atmospheric Sciences, 2022, 79, 2205-2218.	0.6	3
4	Bifurcations in droplet collisions. Physical Review Fluids, 2022, 7, .	1.0	3
5	Alignment of elongated swimmers in a laminar and turbulent Kolmogorov flow. Physical Review Fluids, 2022, 7, .	1.0	2
6	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
7	Inertial torque on a small spheroid in a stationary uniform flow. Physical Review Fluids, 2021, 6, .	1.0	16
8	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
9	Paths to caustic formation in turbulent aerosols. Physical Review Fluids, 2021, 6, .	1.0	7
10	Lord Kelvin's isotropic helicoid. Physical Review Fluids, 2021, 6, .	1.0	3
11	Fractal catastrophes. New Journal of Physics, 2020, 22, 013033.	1.2	6
12	Machine learning for active matter. Nature Machine Intelligence, 2020, 2, 94-103.	8.3	164
13	Importance of fluid inertia for the orientation of spheroids settling in turbulent flow. Journal of Fluid Mechanics, 2020, 886, .	1.4	27
14	Effect of fluid inertia on the orientation of a small prolate spheroid settling in turbulence. New Journal of Physics, 2019, 21, 083008.	1.2	30
15	Zermeloâ€™s problem: Optimal point-to-point navigation in 2D turbulent flows using reinforcement learning. Chaos, 2019, 29, 103138.	1.0	68
16	Alignment of Nonspherical Active Particles in Chaotic Flows. Physical Review Letters, 2019, 123, 138003.	2.9	27
17	Helicoidal particles in turbulent flows with multi-scale helical injection. Journal of Fluid Mechanics, 2019, 869, 646-673.	1.4	5
18	Passive directors in turbulence. Physical Review Fluids, 2019, 4, .	1.0	11

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19	Statistics of the relative velocity of particles in turbulent flows: Monodisperse particles. Physical Review E, 2018, 97, 023105.	0.8	18
20	Relative velocities in bidisperse turbulent aerosols: Simulations and theory. Physical Review E, 2018, 98, .	0.8	14
21	Fractal dimensions and trajectory crossings in correlated random walks. Physical Review E, 2018, 98, .	0.8	1
22	Smart inertial particles. Physical Review Fluids, 2018, 3, .	1.0	33
23	Finding efficient swimming strategies in a three-dimensional chaotic flow by reinforcement learning. European Physical Journal E, 2017, 40, 110.	0.7	48
24	Relative velocities in bidisperse turbulent suspensions. Physical Review E, 2017, 96, 061102.	0.8	13
25	Statistical Model for the Orientation of Nonspherical Particles Settling in Turbulence. Physical Review Letters, 2017, 119, 254501.	2.9	30
26	Flow Navigation by Smart Microswimmers via Reinforcement Learning. Physical Review Letters, 2017, 118, 158004.	2.9	142
27	Inertial-particle accelerations in turbulence: a Lagrangian closure. Journal of Fluid Mechanics, 2016, 798, 187-200.	1.4	5
28	Statistical model for collisions and recollisions of inertial particles in mixing flows. European Physical Journal E, 2016, 39, 55.	0.7	11
29	Statistical models for spatial patterns of heavy particles in turbulence. Advances in Physics, 2016, 65, 1-57.	35.9	114
30	Preferential Sampling and Small-Scale Clustering of Gyrotactic Microswimmers in Turbulence. Physical Review Letters, 2016, 116, 108104.	2.9	49
31	Preferential sampling of helicity by isotropic helicoids. Physical Review Fluids, 2016, 1, .	1.0	11
32	Analysis of the correlation dimension for inertial particles. Physics of Fluids, 2015, 27, .	1.6	11
33	Shape-dependence of particle rotation in isotropic turbulence. Physics of Fluids, 2015, 27, .	1.6	83
34	Tumbling of Small Axisymmetric Particles in Random and Turbulent Flows. Physical Review Letters, 2014, 112, 014501.	2.9	69
35	Clustering of Particles Falling in a Turbulent Flow. Physical Review Letters, 2014, 112, .	2.9	48
36	Relative velocities of inertial particles in turbulent aerosols. Journal of Turbulence, 2014, 15, 34-69.	0.5	36

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37	Lyapunov Exponents for Particles Advected in Compressible Random Velocity Fields at Small and Large Kubo Numbers. Journal of Statistical Physics, 2013, 153, 813-827.	0.5	8
38	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
39	Inertial-particle dynamics in turbulent flows: caustics, concentration fluctuations and random uncorrelated motion. New Journal of Physics, 2012, 14, 115017.	1.2	47
40	Clustering of exponentially separating trajectories. European Physical Journal B, 2012, 85, 1.	0.6	24
41	Distribution of relative velocities in turbulent aerosols. Physical Review E, 2011, 84, 045304.	0.8	58
42	Ergodic and non-ergodic clustering of inertial particles. Europhysics Letters, 2011, 96, 60012.	0.7	38
43	Correlation dimension of inertial particles in random flows. Europhysics Letters, 2010, 89, 50002.	0.7	27
44	Multiple regimes of diffusion. Physical Review E, 2009, 80, 011139.	0.8	4
45	Collisions of particles advected in random flows. New Journal of Physics, 2008, 10, 075014.	1.2	10
46	Variable-Range Projection Model for Turbulence-Driven Collisions. Physical Review Letters, 2008, 101, 174503.	2.9	16
47	Advective collisions. Europhysics Letters, 2007, 80, 69001.	0.7	12