Mickael Bourgoin

List of Publications by Year
in descending order

92 papers	3,218 citations	186209 28 h-index	155592 55 g-index
96 all docs	96 docs citations	96 times ranked	1591 citing authors

#	Article	IF	Citations
1	Generation of a Magnetic Field by Dynamo Action in a Turbulent Flow of Liquid Sodium. Physical Review Letters, 2007, 98, 044502.	2.9	364
2	Analyzing preferential concentration and clustering of inertial particles in turbulence. International Journal of Multiphase Flow, 2012, 40, 1-18.	1.6	226
3	Preferential concentration of heavy particles: A VoronoÃ¯ analysis. Physics of Fluids, 2010, 22, .	1.6	219
4	Magnetic field reversals in an experimental turbulent dynamo. Europhysics Letters, 2007, 77, 59001.	0.7	209
5	The Role of Pair Dispersion in Turbulent Flow. Science, 2006, 311, 835-838.	6.0	175
6	Turbulent Transport of Material Particles: An Experimental Study of Finite Size Effects. Physical Review Letters, 2007, 99, 184502.	2.9	127
7	Magnetohydrodynamics measurements in the von KÃ¡rmÃ¡n sodium experiment. Physics of Fluids, 2002, 14, 3046-3058.	1.6	96
8	Acceleration statistics of finite-sized particles in turbulent flow: the role of FaxÃ©n forces. Journal of Fluid Mechanics, 2009, 630, 179-189.	1.4	95
9	The von KÃ¡rmÃ¡n Sodium experiment: Turbulent dynamical dynamos. Physics of Fluids, 2009, 21, .	1.6	89
10	Small-scale anisotropy in Lagrangian turbulence. New Journal of Physics, 2006, 8, 102-102.	1.2	82
11	An experimental study of turbulent relative dispersion models. New Journal of Physics, 2006, 8, 109-109.	1.2	81
12	Acceleration statistics of inertial particles in turbulent flow. European Physical Journal B, 2008, 66, 531-536.	0.6	80
13	High Order Lagrangian Velocity Statistics in Turbulence. Physical Review Letters, 2006, 96, 024503.	2.9	79
14	Preferential concentration of heavy particles in turbulence. Journal of Turbulence, 2014, 15, 293-310.	0.5	74
15	Preferential concentration of inertial sub-Kolmogorov particles: The roles of mass loading of particles, Stokes numbers, and Reynolds numbers. Physical Review Fluids, 2017, 2, .	1.0	72
16	Dynamo regimes and transitions in the VKS experiment. European Physical Journal B, 2010, 77, 459-468.	0.6	70
17	Chaotic Dynamos Generated by a Turbulent Flow of Liquid Sodium. Physical Review Letters, 2008, 101, 074502.	2.9	67
18	Rotational Intermittency and Turbulence Induced Lift Experienced by Large Particles in a Turbulent Flow. Physical Review Letters, 2011, 106, 154501.	2.9	57

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19	Nonlinear Magnetic Induction by Helical Motion in a Liquid Sodium Turbulent Flow. Physical Review Letters, 2003, 90, 174501.	2.9	56
20	Clustering of finite-size particles in turbulence. Physical Review E, 2012, 86, 035301.	0.8	48
21	Arctic sea ice velocity field: General circulation and turbulentâ€like fluctuations. Journal of Geophysical Research, 2009, 114, .	3.3	46
22	The Lagrangian exploration module: An apparatus for the study of statistically homogeneous and isotropic turbulence. Review of Scientific Instruments, 2010, 81, 055112.	0.6	43
23	An iterative study of time independent induction effects in magnetohydrodynamics. Physics of Fluids, 2004, 16, 2529-2547.	1.6	38
24	Turbulent pair dispersion as a ballistic cascadeÂphenomenology. Journal of Fluid Mechanics, 2015, 772, 678-704.	1.4	37
25	Tracking the dynamics of translation and absolute orientation of a sphere in a turbulent flow. Review of Scientific Instruments, 2011, 82, 033906.	0.6	36
26	The role of collective effects on settling velocity enhancement for inertial particles in turbulence. Journal of Fluid Mechanics, 2018, 846, 1059-1075.	1.4	32
27	Dispersion of Air Bubbles in Isotropic Turbulence. Physical Review Letters, 2018, 121, 054501.	2.9	30
28	Dynamo threshold detection in the von KÃ¡rmÃ¡n sodium experiment. Physical Review E, 2013, 88, 013002.	0.8	29
29	Focus on dynamics of particles in turbulence. New Journal of Physics, 2014, 16, 085010.	1.2	26
30	Bistability between a stationary and an oscillatory dynamo in a turbulent flow of liquid sodium. Journal of Fluid Mechanics, 2009, 641, 217-226.	1.4	25
31	Laboratory Dynamo Experiments. Space Science Reviews, 2010, 152, 543-564.	3.7	25
32	Large sphere motion in a nonhomogeneous turbulent flow. New Journal of Physics, 2014, 16, 013053.	1.2	25
33	An experimental Bullardâ€“von KÃ¡rmÃ¡n dynamo. New Journal of Physics, 2006, 8, 329-329.	1.2	24
34	Columnar structure formation of a dilute suspension of settling spherical particles in a quiescent fluid. Physical Review Fluids, 2016, 1, .	1.0	23
35	Investigation of the small-scale statistics of turbulence in the Modane S1MA wind tunnel. CEAS Aeronautical Journal, 2018, 9, 269-281.	0.9	20
36	Symmetry and couplings in stationary Von KÃ¡rmÃ¡n sodium dynamos. New Journal of Physics, 2012, 14, 013044.	1.2	18

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37	Chaotic mixing in effective compressible flows. Physical Review E, 2014, 90, 013027.	0.8	16
38	A simplified and versatile calibration method for multi-camera optical systems in 3D particle imaging. Review of Scientific Instruments, 2019, 90, 035112.	0.6	16
39	Preferential Concentration of Free-Falling Heavy Particles in Turbulence. Physical Review Letters, 2020, 125, 064504.	2.9	16
40	Advection and diffusion in a chemically induced compressible flow. Journal of Fluid Mechanics, 2018, 847, 228-243.	1.4	15
41	Experimental Observation of Spatially Localized Dynamo Magnetic Fields. Physical Review Letters, 2012, 108, 144501.	2.9	14
42	Experimental detection of superclusters of water droplets in homogeneous isotropic turbulence. Europhysics Letters, 2015, 112, 54004.	0.7	14
43	Kolmogorovian Active Turbulence of a Sparse Assembly of Interacting Marangoni Surfers. Physical Review X, 2020, 10, .	2.8	14
44	Flow dynamics and magnetic induction in the von-KÃ¡rmÃ¡n plasma experiment. Journal of Plasma Physics, 2015, 81, .	0.7	13
45	Lagrangian diffusion properties of a free shear turbulent jet. Journal of Fluid Mechanics, 2021, 918, .	1.4	13
46	The VKS experiment: turbulent dynamical dynamos. Comptes Rendus Physique, 2008, 9, .	0.3	12
47	Reynolds number influence on preferential concentration of heavy particles in turbulent flows. Journal of Physics: Conference Series, 2011, 318, 052015.	0.3	12
48	Analysis of the dissipative range of the energy spectrum in grid turbulence and in direct numerical simulations. Physical Review Fluids, 2020, 5, .	1.0	12
49	Bi-stability of a pendular disk in laminar and turbulent flows. Journal of Fluid Mechanics, 2013, 728, .	1.4	11
50	Inhomogeneity and Lagrangian unsteadiness in turbulent thermal convection. Physical Review Fluids, 2016, 1, .	1.0	11
51	Using ray-traversal for 3D particle matching in the context of particle tracking velocimetry in fluid mechanics. Review of Scientific Instruments, 2020, 91, 085105.	0.6	10
52	Stochastic dynamics of particles trapped in turbulent flows. Physical Review E, 2016, 93, 023118.	0.8	9
53	Modelling Lagrangian velocity and acceleration in turbulent flows as infinitely differentiable stochastic processes. Journal of Fluid Mechanics, 2020, 900, .	1.4	9
54	Mixing and unmixing induced by active camphor particles. Physical Review Fluids, 2021, 6, .	1.0	8

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55	Clustering of vector nulls in homogeneous isotropic turbulence. Physical Review Fluids, 2021, 6, .	1.0	8
56	Rare Event-Triggered Transitions in Aerodynamic Bifurcation. Physical Review Letters, 2021, 126, 104501.	2.9	8
57	Experimental validation of fluid inertia models for a cylinder settling in a quiescent flow. Physical Review Fluids, 2022, 7, .	1.0	8
58	Turbulent transport of finite sized material particles. Journal of Physics: Conference Series, 2011, 318, 012005.	0.3	7
59	Long-term memory in experiments and numerical simulations of hydrodynamic and magnetohydrodynamic turbulence. Physical Review E, 2014, 89, 053005.	0.8	7
60	Stability of a Liquid Jet Impinging on Confined Saturated Sand. Physical Review Letters, 2020, 124, 224502.	2.9	7
61	Ubiquity of particleâ€“vortex interactions in turbulent counterflow of superfluid helium. Journal of Fluid Mechanics, 2021, 911, .	1.4	7
62	Broken Mirror Symmetry of Tracerâ€™s Trajectories in Turbulence. Physical Review Letters, 2021, 127, 254502.	2.9	7
63	Large-scale fluctuations and dynamics of the Bullardâ€“von KÃ¡rmÃ¡n dynamo. Geophysical and Astrophysical Fluid Dynamics, 2010, 104, 189-205.	0.4	6
64	A multi-time-step noise reduction method for measuring velocity statistics from particle tracking velocimetry. Measurement Science and Technology, 2017, 28, 107002.	1.4	6
65	Phoresis in turbulent flows. New Journal of Physics, 2017, 19, 123030.	1.2	6
66	Robust estimate of dynamo thresholds in the von KÃ¡rmÃ¡n sodium experiment using the extreme value theory. New Journal of Physics, 2014, 16, 083001.	1.2	5
67	Clustering and Settling of Inertial Particles in Turbulence. Springer Proceedings in Physics, 2016, , 475-482.	0.1	5
68	Equilibrium position of a rigid sphere in a turbulent jet: A problem of elastic reconfiguration. Physical Review E, 2017, 96, 033105.	0.8	5
69	Inertial drag-out problem: sheets and films on a rotating disc. Journal of Fluid Mechanics, 2021, 908, .	1.4	5
70	Stochastic reversal dynamics of two interacting magnetic dipoles: A simple model experiment. Physical Review E, 2016, 94, 012224.	0.8	4
71	Pair dispersion in inhomogeneous turbulent thermal convection. Physical Review Fluids, 2019, 4, .	1.0	4
72	Characterization of coupling between inertial particles and turbulent wakes from porous disk generators. Journal of Fluid Mechanics, 2022, 933, .	1.4	4

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73	Do finite-size neutrally buoyant particles cluster?. Physica Scripta, 2013, T155, 014056.	1.2	3
74	Probing fluid torque with a hydrodynamical trap: Rotation of chiral particles levitating in a turbulent jet. Physics of Fluids, 2019, 31, 125116.	1.6	3
75	Sedimentation of a suspension of paramagnetic particles in an external magnetic field. Physical Review E, 2020, 102, 023101.	0.8	3
76	Magnetic Janssen effect. Nature Communications, 2021, 12, 2486.	5.8	3
77	Multiscale energy budget of inertially driven turbulence in normal and superfluid helium. Physical Review Fluids, 2021, 6, .	1.0	3
78	Recent Developments in Particle Tracking Diagnostics for Turbulence Research. Soft and Biological Matter, 2019, , 177-209.	0.3	3
79	Single inertial particle statistics in turbulent flows from Lagrangian velocity models. Physical Review Fluids, 2022, 7, .	1.0	3
80	Dynamo efficiency controlled by hydrodynamic bistability. Physical Review E, 2014, 89, 063023.	0.8	2
81	Effect of FaxÃ©n forces on acceleration statistics of material particles in turbulent flow. Springer Proceedings in Physics, 2009, , 11-14.	0.1	2
82	Markov property of Lagrangian turbulence. Europhysics Letters, 2022, 137, 53001.	0.7	2
83	Two-dimensional numerical model of Marangoni surfers: From single swimmer to crystallization. Physical Review E, 2021, 104, 064608.	0.8	2
84	Constrained dynamics of an inertial particle in a turbulent flow. Journal of Physics: Conference Series, 2011, 318, 052016.	0.3	1
85	3D acoustic Lagrangian velocimetry. , 2007, , 243-256.		1
86	Laboratory Dynamo Experiments. Space Sciences Series of ISSI, 2009, , 543-564.	0.0	1
87	Turbulence induced lift experienced by large particles in a turbulent flow. Journal of Physics: Conference Series, 2011, 318, 052027.	0.3	0
88	Two-time statistics of inertial particles dynamics in wind tunnel grid generated turbulence. , 2012, , .		0
89	Some Aspects of Lagrangian Dynamics of Turbulence. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2018, , 101-127.	0.3	0
90	Taming the Janssen effect. EPJ Web of Conferences, 2021, 249, 08004.	0.1	0

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91	Discharge of a 2D magnetic silo. EPJ Web of Conferences, 2021, 249, 03017.	0.1	0
92	Lagrangian statistics of inertial particles in turbulent flow. Springer Proceedings in Physics, 2009, , 31-34.	0.1	0