Emmanuel Leveque

List of Publications by Year
in descending order

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53 papers	2,915 citations	201674 27 h-index	168389 53 g-index
53 all docs	53 docs citations	53 times ranked	1641 citing authors

#	Article	IF	Citations
1	Universal scaling laws in fully developed turbulence. Physical Review Letters, 1994, 72, 336-339.	7.8	1,073
2	Shear-improved Smagorinsky model for large-eddy simulation of wall-bounded turbulent flows. Journal of Fluid Mechanics, 2007, 570, 491-502.	3.4	162
3	Experimental and numerical study of the Lagrangian dynamics of high Reynolds turbulence. New Journal of Physics, 2004, 6, 116-116.	2.9	154
4	Universal Intermittent Properties of Particle Trajectories in Highly Turbulent Flows. Physical Review Letters, 2008, 100, 254504.	7.8	145
5	Long Time Correlations in Lagrangian Dynamics: A Key to Intermittency in Turbulence. Physical Review Letters, 2002, 89, 254502.	7.8	105
6	Acceleration statistics of finite-sized particles in turbulent flow: the role of FaxÃ©n forces. Journal of Fluid Mechanics, 2009, 630, 179-189.	3.4	95
7	Lagrangian Velocity Statistics in Turbulent Flows: Effects of Dissipation. Physical Review Letters, 2003, 91, 214502.	7.8	81
8	Dynamics of inertial particles in a turbulent von KÃ¡rmÃ¡n flow. Journal of Fluid Mechanics, 2011, 668, 223-235.	3.4	63
9	Unified multifractal description of velocity increments statistics in turbulence: Intermittency and skewness. Physica D: Nonlinear Phenomena, 2006, 218, 77-82.	2.8	62
10	Energy cascade and the four-fifths law in superfluid turbulence. Europhysics Letters, 2012, 97, 34006.	2.0	57
11	Prevalence of the sling effect for enhancing collision rates in turbulent suspensions. Journal of Fluid Mechanics, 2014, 749, 841-852.	3.4	50
12	Shear Effects in Nonhomogeneous Turbulence. Physical Review Letters, 2000, 85, 1436-1439.	7.8	48
13	Direct and large-eddy simulation of turbulent flows on composite multi-resolution grids by the lattice Boltzmann method. Journal of Computational Physics, 2014, 256, 220-233.	3.8	46
14	Quantum turbulence at finite temperature: The two-fluids cascade. Europhysics Letters, 2009, 87, 54006.	2.0	45
15	On the rapid increase of intermittency in the near-dissipation range of fully developed turbulence. European Physical Journal B, 2005, 45, 561-567.	1.5	42
16	A phenomenological theory of Eulerian and Lagrangian velocity fluctuations in turbulent flows. Comptes Rendus Physique, 2012, 13, 899-928.	0.9	42
17	Intermittency of Velocity Time Increments in Turbulence. Physical Review Letters, 2005, 95, 064501.	7.8	41
18	Viscous Effects on Inertial Range Scalings in a Dynamical Model of Turbulence. Physical Review Letters, 1995, 75, 2690-2693.	7.8	39

#	Article	IF	Citations
19	Title is missing!. Journal of Statistical Physics, 2003, 113, 701-717.	1.2	38
20	Scaling laws for the turbulent mixing of a passive scalar in the wake of a cylinder. Physics of Fluids, 1999, 11, 1869-1879.	4.0	32
21	Smoothing algorithms for mean-flow extraction in large-eddy simulation of complex turbulent flows. Physics of Fluids, 2010, 22, .	4.0	32
22	Mesoscale equipartition of kinetic energy in quantum turbulence. Europhysics Letters, 2011, 94, 24001.	2.0	32
23	Impact of trailing wake drag on the statistical properties and dynamics of finite-sized particle in turbulence. Physica D: Nonlinear Phenomena, 2012, 241, 237-244.	2.8	32
24	Scaling properties of the streamwise component of velocity in a turbulent boundary layer. Physica D: Nonlinear Phenomena, 2000, 141, 183-198.	2.8	31
25	Effective viscosity in quantum turbulence: A steady-state approach. Europhysics Letters, 2014, 106, 24006.	2.0	30
26	Statistical Model for the Orientation of Nonspherical Particles Settling in Turbulence. Physical Review Letters, 2017, 119, 254501.	7.8	30
27	Numerical studies towards practical large-eddy simulation. Journal of Thermal Science, 2007, 16, 328-336.	1.9	29
28	Cascade structures and scaling exponents in a dynamical model of turbulence: Measurements and comparison. Physical Review E, 1997, 55, 2789-2799.	2.1	28
29	Central-moment lattice Boltzmann schemes with fixed and moving immersed boundaries. Computers and Mathematics With Applications, 2016, 72, 1616-1628.	2.7	27
30	Importance of fluid inertia for the orientation of spheroids settling in turbulent flow. Journal of Fluid Mechanics, 2020, 886, .	3.4	27
31	Settling and collision between small ice crystals in turbulent flows. Physical Review Fluids, 2018, 3, .	2.5	19
32	Wall-modeled large-eddy simulation of the flow past a rod-airfoil tandem by the Lattice Boltzmann method. International Journal of Numerical Methods for Heat and Fluid Flow, 2018, 28, 1096-1116.	2.8	16
33	Shear improved Smagorinsky model for large eddy simulation of flow in a stirred tank with a Rushton disk turbine. Chemical Engineering Research and Design, 2016, 108, 69-80.	5.6	15
34	Collision rate of ice crystals with water droplets in turbulent flows. Journal of Fluid Mechanics, 2018, 845, 615-641.	3.4	14
35	Multiple collisions in turbulent flows. Physical Review E, 2013, 88, 063008.	2.1	12
36	Introduction of longitudinal and transverse Lagrangian velocity increments in homogeneous and isotropic turbulence. Europhysics Letters, 2014, 108, 54004.	2.0	12

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37	Finite-Mode Spectral Model of Homogeneous and Isotropic Navier-Stokes Turbulence: A Rapidly Depleted Energy Cascade. Physical Review Letters, 2001, 86, 4033-4036.	7.8	11
38	Local and nonlocal pressure Hessian effects in real and synthetic fluid turbulence. Physics of Fluids, 2011, 23, .	4.0	11
39	Advanced lattice Boltzmann scheme for high-Reynolds-number magneto-hydrodynamic flows. Journal of Turbulence, 2018, 19, 446-462.	1.4	10
40	Disproportionate entrance length in superfluid flows and the puzzle of counterflow instabilities. Physical Review Fluids, 2017, 2, .	2.5	10
41	Numerical study of extreme mechanical force exerted by a turbulent flow on a bluff body by direct and rare-event sampling techniques. Journal of Fluid Mechanics, 2020, 895, .	3.4	9
42	Hybrid simulation combining two spaceâ€“time discretization of the discrete-velocity Boltzmann equation. Journal of Computational Physics, 2017, 349, 399-414.	3.8	8
43	Collision rate for suspensions at large Stokes numbers â€“ comparing Navierâ€“Stokes and synthetic turbulence. Journal of Turbulence, 2015, 16, 15-25.	1.4	7
44	Huge Fluctuations in Weight Measurements at the Bottom of a Two-Dimensional Vertical Sheet of Grains. Physical Review Letters, 2004, 92, 204301.	7.8	6
45	Lagrangian intermittencies in dynamic and static turbulent velocity fields from direct numerical simulations. Journal of Turbulence, 2007, 8, N3.	1.4	6
46	Harmonic oscillations of a thin lamina in a quiescent viscous fluid: A numerical investigation within the framework of the lattice Boltzmann method. Computers and Structures, 2015, 157, 209-217.	4.4	6
47	Connecting large-scale velocity and temperature bursts with small-scale intermittency in stratified turbulence. Europhysics Letters, 2021, 135, 14001.	2.0	6
48	Spread of consensus in self-organized groups of individuals: Hydrodynamics matters. Europhysics Letters, 2016, 113, 18001.	2.0	5
49	A Kalman filter adapted to the estimation of mean gradients in the large-eddy simulation of unsteady turbulent flows. Computers and Fluids, 2016, 127, 65-77.	2.5	4
50	Estimating the Collision Rate of Inertial Particles in a Turbulent Flow: Limitations of the "Ghost Collision" Approximation. Journal of Physics: Conference Series, 2011, 318, 052024.	0.4	3
51	Recursive finite-difference Lattice Boltzmann schemes. Computers and Mathematics With Applications, 2021, 96, 95-108.	2.7	3
52	An introduction to turbulence in fluids, and modelling aspects. EAS Publications Series, 2006, 21, 7-42.	0.3	2
53	Consistent time-step optimization in the lattice Boltzmann method. Journal of Computational Physics, 2022, 462, 111224.	3.8	2