Massimo Vergassola

List of Publications by Year in Descending Order

95 papers	**8,479** citations	**44** h-index	**92** g-index
111 ext. papers	**9,802** ext. citations	**8.8** avg, IF	**6** L-index

#	Paper	IF	Citations
95	Sector search strategies for odor trail tracking.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119,	11.5	1
94	A Suite of Neurophotonic Tools to Underpin the Contribution of Internal Brain States in fMRI. *Current Opinion in Biomedical Engineering*, **2021**, 18, 100273-100273	4.4	0
93	A mechanism for promoters to readout morphogenetic positional information in less than a minute. *ELife*, **2020**, 9,	8.9	5
92	Odorant Receptor Inhibition Is Fundamental to Odor Encoding. *Current Biology*, **2020**, 30, 2574-2587.e6	6.3	38
91	Antagonistic odor interactions in olfactory sensory neurons are widespread in freely breathing mice. *Nature Communications*, **2020**, 11, 3350	17.4	22
90	Self-Organized Nuclear Positioning Synchronizes the Cell Cycle in Drosophila Embryos. *Cell*, **2019**, 177, 925-941.e17	56.2	44
89	Chemotaxis as a navigation strategy to boost range expansion. *Nature*, **2019**, 575, 658-663	50.4	50
88	Somatosensory neurons integrate the geometry of skin deformation and mechanotransduction channels to shape touch sensing. *ELife*, **2019**, 8,	8.9	8
87	Progressive recruitment of distal MEC-4 channels determines touch response strength in. *Journal of General Physiology*, **2019**, 151, 1213-1230	3.4	5
86	Exploring the function of bacterial chemotaxis. *Current Opinion in Microbiology*, **2018**, 45, 16-21	7.9	27
85	Mitotic waves in the early embryogenesis of : Bistability traded for speed. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E2165-E2174	11.5	28
84	Antagonism in olfactory receptor neurons and its implications for the perception of odor mixtures. *ELife*, **2018**, 7,	8.9	39
83	Glider soaring via reinforcement learning in the field. *Nature*, **2018**, 562, 236-239	50.4	52
82	Theory of feedback controlled brain stimulations for Parkinson's disease. *Physica A: Statistical Mechanics and Its Applications*, **2016**, 441, 121-130	3.3	1
81	The Role of Adaptation in Bacterial Speed Races. *PLoS Computational Biology*, **2016**, 12, e1004974	5	20
80	Infomax Strategies for an Optimal Balance Between Exploration and Exploitation. *Journal of Statistical Physics*, **2016**, 163, 1454-1476	1.5	6
79	Waves of Cdk1 Activity in S Phase Synchronize the Cell Cycle in Drosophila Embryos. *Developmental Cell*, **2016**, 38, 399-412	10.2	71

78	Learning to soar in turbulent environments. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E4877-84	11.5	72
77	The Impact of Environmental Fluctuations on Evolutionary Fitness Functions. *Scientific Reports*, **2015**, 5, 15211	4.9	51
76	Tissue mechanics govern the rapidly adapting and symmetrical response to touch. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E6955-63	11.5	44
75	T Cells Integrate Local and Global Cues to Discriminate between Structurally Similar Antigens. *Cell Reports*, **2015**, 11, 1208-19	10.6	45
74	Cell-size control and homeostasis in bacteria. *Current Biology*, **2015**, 25, 385-391	6.3	405
73	Odor Landscapes in Turbulent Environments. *Physical Review X*, **2014**, 4,	9.1	52
72	Phenotypic model for early T-cell activation displaying sensitivity, specificity, and antagonism. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E888-97	11.5	73
71	Decisions on the fly in cellular sensory systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E3704-12	11.5	38
70	Nonlinearity, fluctuations, and response in sensory systems. *Physical Review Letters*, **2012**, 108, 258102	7.4	10
69	Noninvasive inference of the molecular chemotactic response using bacterial trajectories. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 1802-7	11.5	60
68	Statistical Distribution of Quantum Entanglement for a Random Bipartite State. *Journal of Statistical Physics*, **2011**, 142, 403-438	1.5	68
67	Molecular and Functional Aspects of Bacterial Chemotaxis. *Journal of Statistical Physics*, **2011**, 144, 219-240	1.5	20
66	Phase transitions in the distribution of bipartite entanglement of a random pure state. *Physical Review Letters*, **2010**, 104, 110501	7.4	68
65	Bacterial strategies for chemotaxis response. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 1391-6	11.5	136
64	Inference in particle tracking experiments by passing messages between images. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 7663-8	11.5	28
63	The Listeria transcriptional landscape from saprophytism to virulence. *Nature*, **2009**, 459, 950-6	50.4	701
62	Repulsion and metabolic switches in the collective behavior of bacterial colonies. *Biophysical Journal*, **2009**, 97, 688-98	2.9	11
61	Chasing information to search in random environments. *Journal of Physics A: Mathematical and Theoretical*, **2009**, 42, 434009	2	38

60	Large deviations of the maximum eigenvalue for wishart and Gaussian random matrices. *Physical Review Letters*, **2009**, 102, 060601	7.4	85
59	Message-passing algorithms for the prediction of protein domain interactions from protein-protein interaction data. *Bioinformatics*, **2008**, 24, 2064-70	7.2	13
58	Transcription factor concentrations versus binding site affinities in the yeast S. cerevisiae. *Physical Biology*, **2007**, 4, 134-43	3	4
57	Nonlinear dynamics of the viscoelastic Kolmogorov flow. *Journal of Fluid Mechanics*, **2007**, 590, 61-80	3.7	20
56	'Infotaxis' as a strategy for searching without gradients. *Nature*, **2007**, 445, 406-9	50.4	479
55	Identification of new noncoding RNAs in Listeria monocytogenes and prediction of mRNA targets. *Nucleic Acids Research*, **2007**, 35, 962-74	20.1	194
54	Causes for the intriguing presence of tRNAs in phages. *Genome Research*, **2007**, 17, 1486-95	9.7	201
53	Highly variable rates of genome rearrangements between hemiascomycetous yeast lineages. *PLoS Genetics*, **2006**, 2, e32	6	83
52	Codon usage domains over bacterial chromosomes. *PLoS Computational Biology*, **2006**, 2, e37	5	36
51	Shear effects on passive scalar spectra. *Journal of Fluid Mechanics*, **2005**, 523, 99-108	3.7	25
50	The viscoelastic Kolmogorov flow: eddy viscosity and linear stability. *Journal of Fluid Mechanics*, **2005**, 523, 161-170	3.7	27
49	An evolutionary and functional assessment of regulatory network motifs. *Genome Biology*, **2005**, 6, R35	18.3	77
48	VirR, a response regulator critical for Listeria monocytogenes virulence. *Molecular Microbiology*, **2005**, 57, 1367-80	4.1	150
47	Cooperative evolution in protein complexes of yeast from comparative analyses of its interaction network. *Proteomics*, **2005**, 5, 3116-9	4.8	6
46	DNA macroarray for identification and typing of Staphylococcus aureus isolates. *Journal of Clinical Microbiology*, **2004**, 42, 2054-64	9.7	35
45	Active and passive fields face to face. *New Journal of Physics*, **2004**, 6, 72-72	2.9	57
44	CovS/CovR of group B streptococcus: a two-component global regulatory system involved in virulence. *Molecular Microbiology*, **2004**, 54, 1250-68	4.1	148
43	Lagrangian Dispersion in Gaussian Self-Similar Velocity Ensembles. *Journal of Statistical Physics*, **2003**, 113, 643-692	1.5	42

42	Computational detection of genomic cis-regulatory modules applied to body patterning in the early Drosophila embryo. *BMC Bioinformatics*, **2002**, 3, 30	3.6	168
41	Active versus passive scalar turbulence. *Physical Review Letters*, **2002**, 89, 234502	7.4	24
40	Scaling and universality in turbulent convection. *Physical Review Letters*, **2002**, 88, 054503	7.4	45
39	Isotropy vs anisotropy in small-scale turbulence. *Physics of Fluids*, **2001**, 13, 2139-2141	4.4	46
38	Statistical conservation laws in turbulent transport. *Physical Review Letters*, **2001**, 87, 164502	7.4	38
37	Universal decay of scalar turbulence. *Physical Review Letters*, **2001**, 86, 2305-8	7.4	19
36	Statistical geometry in scalar turbulence. *Physical Review Letters*, **2001**, 86, 424-7	7.4	67
35	Particles and fields in fluid turbulence. *Reviews of Modern Physics*, **2001**, 73, 913-975	40.5	930
34	Phase transition in the passive scalar advection. *Physica D: Nonlinear Phenomena*, **2000**, 138, 63-90	3.3	98
33	Universality and saturation of intermittency in passive scalar turbulence. *Physical Review Letters*, **2000**, 84, 2385-8	7.4	95
32	Inverse energy cascade in two-dimensional turbulence: deviations from gaussian behavior. *Physical Review E*, **2000**, 61, R29-32	2.4	153
31	Large-scale dynamo produced by negative magnetic eddy diffusivities. *Geophysical and Astrophysical Fluid Dynamics*, **1999**, 91, 131-146	1.4	29
30	Partial Screening in Dense Lattice-Configuration Suspensions. *Physical Review Letters*, **1999**, 83, 3414-3417	7.4	5
29	Small-Scale Turbulent Dynamo. *Physical Review Letters*, **1999**, 83, 4065-4068	7.4	75
28	Inverse versus Direct Cascades in Turbulent Advection. *Physical Review Letters*, **1998**, 80, 512-515	7.4	45
27	Intermittency in Passive Scalar Advection. *Physical Review Letters*, **1998**, 80, 5532-5535	7.4	99
26	Interference between turbulent and molecular diffusion. *Europhysics Letters*, **1997**, 37, 535-540	1.6	18
25	Structures and Intermittency in a Passive Scalar Model. *Physical Review Letters*, **1997**, 79, 1849-1852	7.4	29

24	Inverse cascade and intermittency of passive scalar in one-dimensional smooth flow. *Physical Review E*, **1997**, 56, 5483-5499	2.4	37
23	Escape rates in hamiltonian systems. *Journal of Statistical Physics*, **1997**, 89, 549-560	1.5	7
22	Scalar transport in compressible flow. *Physica D: Nonlinear Phenomena*, **1997**, 106, 148-166	3.3	47
21	Vorticity selection in large-scale two-dimensional flow. *Europhysics Letters*, **1996**, 36, 367-372	1.6	2
20	Anomalous scaling for passively advected magnetic fields. *Physical Review E*, **1996**, 53, R3021-R3024	2.4	91
19	Stieltjes integral representation of effective diffusivities in time-dependent flows. *Physical Review E*, **1995**, 52, 3249-3251	2.4	30
18	Slow-down of nonlinearity in 2-D Navier-Stokes flow. *Physica D: Nonlinear Phenomena*, **1994**, 76, 291-296	3.3	4
17	A fast Legendre transform algorithm and applications to the adhesion model. *Journal of Scientific Computing*, **1994**, 9, 259-281	2.3	40
16	Negative eddy viscosity in isotropically forced two-dimensional flow: linear and nonlinear dynamics. *Journal of Fluid Mechanics*, **1994**, 260, 95-126	3.7	77
15	Chiral Non-Linearities in Forced 2D Navier-Stokes Flows. *Europhysics Letters*, **1993**, 24, 41-45	1.6	6
14	Further results on multifractality in shell models. *Physics of Fluids A, Fluid Dynamics*, **1993**, 5, 2533-2538		96
13	A random process for the construction of multiaffine fields. *Physica D: Nonlinear Phenomena*, **1993**, 65, 352-358	3.3	91
12	On the multifractal properties of the energy dissipation derived from turbulence data. *Journal of Fluid Mechanics*, **1992**, 238, 467-486	3.7	63
11	Multiscaling transformation in dynamical systems and turbulence. *Physica A: Statistical Mechanics and Its Applications*, **1992**, 185, 174-180	3.3	3
10	The lattice Boltzmann equation: theory and applications. *Physics Reports*, **1992**, 222, 145-197	27.7	1603
9	Non-conservative character of the intersection of self-similar cascades. *Physica A: Statistical Mechanics and Its Applications*, **1991**, 174, 425-437	3.3	1
8	Wavelet transforms of self-similar processes. *Physica D: Nonlinear Phenomena*, **1991**, 54, 58-64	3.3	43
7	Optimal wavelet analysis and its application to two-dimensional turbulence. *Fluid Dynamics Research*, **1991**, 8, 117-126	1.2	15

6	Multifractality in the statistics of the velocity gradients in turbulence. *Physical Review Letters*, **1991**, 67, 2299-2302	7.4	116
5	Lattice Boltzmann scheme for two-dimensional magnetohydrodynamics. *Physical Review A*, **1991**, 43, 4521-4524	2.6	45
4	The lattice Boltzmann equation for turbulence. *Nuclear Physics, Section B, Proceedings Supplements*, **1990**, 17, 708-711		1
3	On the Hydrodynamic Behaviour of the Lattice Boltzmann Equation. *Europhysics Letters*, **1990**, 13, 411-416	1.6	26
2	Turbulence Modelling by Nonhydrodynamic Variables. *Europhysics Letters*, **1990**, 13, 727-732	1.6	22
1	Antagonism in olfactory receptor neurons and its implications for the perception of odor mixtures		2