Angelo Vulpiani

List of Publications by Citations

70 papers	4,326 citations	31 h-index	65 g-index
74 ext. papers	4,679 ext. citations	3.6 avg, IF	5.17 L-index

#	Paper	IF	Citations
70	Anomalous scaling laws in multifractal objects. *Physics Reports*, **1987**, 156, 147-225	27.7	830
69	. *Tellus*, **1982**, 34, 10-16		544
68	Stochastic resonance in climatic change. *Tellus*, **1982**, 34, 10-15		523
67	Dynamical Systems Approach to Turbulence **1998**,		322
66	Power Laws in Solar Flares: Self-Organized Criticality or Turbulence?. *Physical Review Letters*, **1999**, 83, 4662-4665	7.4	287
65	A Theory of Stochastic Resonance in Climatic Change. *SIAM Journal on Applied Mathematics*, **1983**, 43, 565-578	1.8	223
64	Equipartition threshold in nonlinear large Hamiltonian systems: The Fermi-Pasta-Ulam model. *Physical Review A*, **1985**, 31, 1039-1045	2.6	164
63	Degrees of freedom of turbulence. *Physical Review A*, **1987**, 35, 1971-1973	2.6	86
62	Chaotic behavior in nonlinear Hamiltonian systems and equilibrium statistical mechanics. *Journal of Statistical Physics*, **1987**, 48, 539-559	1.5	68
61	Relaxation to different stationary states in the Fermi-Pasta-Ulam model. *Physical Review A*, **1983**, 28, 3544-3552	2.6	67
60	Correlation functions and relaxation properties in chaotic dynamics and statistical mechanics. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1990**, 144, 341-346	2.3	66
59	Reductionism, Emergence and Levels of Reality **2014**,		58
58	Chaotic diffusion across a magnetic field in a model of electrostatic turbulent plasma. *Physical Review A*, **1988**, 38, 344-363	2.6	56
57	Further results on the equipartition threshold in large nonlinear Hamiltonian systems. *Physical Review A*, **1985**, 31, 2740-2742	2.6	56
56	Dynamics of passively advected impurities in simple two-dimensional flow models. *Physics of Fluids A, Fluid Dynamics*, **1992**, 4, 1805-1820		54
55	Topological thermal instability and length of proteins. *Proteins: Structure, Function and Bioinformatics*, **2004**, 55, 529-35	4.2	51
54	Mixing in a Meandering Jet: A Markovian Approximation. *Journal of Physical Oceanography*, **1999**, 29, 2578-2594	2.4	49

53	Liapunov exponents in high-dimensional symplectic dynamics. *Journal of Statistical Physics*, **1987**, 46, 147-160	1.5	49
52	Complexity in dynamical systems with noise. *Physical Review Letters*, **1995**, 74, 66-69	7.4	48
51	Lagrangian Drifter Dispersion in the Southwestern Atlantic Ocean. *Journal of Physical Oceanography*, **2011**, 41, 1659-1672	2.4	44
50	Multiscaling in multifractals. *Physical Review Letters*, **1991**, 67, 208-211	7.4	42
49	Anomalous scaling and generalized Lyapunov exponents of the one-dimensional Anderson model. *Physical Review B*, **1987**, 35, 2015-2020	3.3	41
48	Linear response and correlation of a self-propelled particle in the presence of external fields. *Journal of Statistical Mechanics: Theory and Experiment*, **2018**, 2018, 033203	1.9	37
47	Evidence for a k□/3 Spectrum from the EOLE Lagrangian Balloons in the Low Stratosphere. *Journals of the Atmospheric Sciences*, **2004**, 61, 2936-2942	2.1	37
46	A statistical model for translocation of structured polypeptide chains through nanopores. *Journal of Physical Chemistry B*, **2009**, 113, 10348-56	3.4	35
45	Active escape dynamics: The effect of persistence on barrier crossing. *Journal of Chemical Physics*, **2019**, 150, 024902	3.9	34
44	Possible failure of Arnold diffusion in nonlinear hamiltonian systems with more than two degrees of freedom. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1984**, 106, 207-211	2.3	34
43	Finite size Lyapunov exponent: review on applications. *Journal of Physics A: Mathematical and Theoretical*, **2013**, 46, 254019	2	32
42	Concept of complexity in random dynamical systems. *Physical Review E*, **1996**, 53, 2087-2098	2.4	32
41	A consistent description of fluctuations requires negative temperatures. *Journal of Statistical Mechanics: Theory and Experiment*, **2015**, 2015, P12002	1.9	31
40	The origin of diffusion: the case of non-chaotic systems. *Physica D: Nonlinear Phenomena*, **2003**, 180, 129-139	3.3	26
39	Generalized Lyapunov exponents in high-dimensional chaotic dynamics and products of large random matrices. *Journal of Statistical Physics*, **1988**, 53, 583-601	1.5	22
38	Forecasting in Light of Big Data. *Philosophy and Technology*, **2018**, 31, 557-569	3.6	18
37	Linear and nonlinear thermodynamics of a kinetic heat engine with fast transformations. *Physical Review E*, **2016**, 93, 042116	2.4	16
36	Statistical mechanics of systems with long-range interactions and negative absolute temperature. *Physical Review E*, **2019**, 99, 042152	2.4	15

35	Langevin equation in systems with also negative temperatures. *Journal of Statistical Mechanics: Theory and Experiment*, **2018**, 2018, 043207	1.9	14
34	Transport properties of chaotic and non-chaotic many particle systems. *Journal of Statistical Mechanics: Theory and Experiment*, **2007**, 2007, P12001-P12001	1.9	14
33	Random fractals, phase transitions, and negative dimension spectra. *Physical Review E*, **1994**, 50, 4352-4356	2.4	14
32	Non-anomalous diffusion is not always Gaussian. *European Physical Journal B*, **2014**, 87, 1	1.2	12
31	On the Foundations of Statistical Mechanics: Ergodicity, Many Degrees of Freedom and Inference. *Communications in Theoretical Physics*, **2014**, 62, 469-475	2.4	9
30	Optimal Strategies for Prudent Investors. *International Journal of Theoretical and Applied Finance*, **1998**, 01, 473-486	0.5	9
29	On the effects of an uncertainty on the evolution law in dynamical systems. *Physica A: Statistical Mechanics and Its Applications*, **1989**, 160, 482-502	3.3	9
28	Lagrangian chaos and small scale structure of passive scalars. *Physica D: Nonlinear Phenomena*, **1989** , 38, 372-376	3.3	8
27	Role of Lagrangian chaoticity on the small scale structure of passive scalars in fluids. *Physica A: Statistical Mechanics and Its Applications*, **1990**, 166, 305-324	3.3	8
26	Statistical mechanics of systems with negative temperature. *Physics Reports*, **2021**, 923, 1-50	27.7	7
25	Effective equations in complex systems: from Langevin to machine learning. *Journal of Statistical Mechanics: Theory and Experiment*, **2020**, 2020, 014003	1.9	6
24	Strong chaos without the butterfly effect in dynamical systems with feedback. *Journal of Physics A*, **1996**, 29, 2291-2298		6
23	Derivation of a Langevin equation in a system with multiple scales: The case of negative temperatures. *Physical Review E*, **2019**, 99, 060101	2.4	5
22	Transport and fluctuation-dissipation relations in asymptotic and preasymptotic diffusion across channels with variable section. *Physical Review E*, **2014**, 90, 062110	2.4	5
21	ON THE FLUCTUATION-RESPONSE RELATION IN GEOPHYSICAL SYSTEMS. *International Journal of Modern Physics B*, **2009**, 23, 5515-5529	1.1	5
20	Statistical Mechanics of an Integrable System. *Journal of Statistical Physics*, **2021**, 183, 1	1.5	5
19	Frequency-control of protein translocation across an oscillating nanopore. *Physical Chemistry Chemical Physics*, **2017**, 19, 11260-11272	3.6	4
18	Lewis Fry Richardson: scientist, visionary and pacifist. *Lettera Matematica*, **2014**, 2, 121-128		4

17	Effective models and predictability of chaotic multiscale systems via machine learning. *Physical Review E*, **2020**, 102, 052203	2.4	4
16	Data science and the art of modelling. *Lettera Matematica*, **2018**, 6, 121-129		3
15	Diffusive transport in highly corrugated channels. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2019**, 383, 1084-1091	2.3	2
14	Law Without Law or Just Limit Theorems?. *Foundations of Physics*, **2018**, 48, 1112-1127	1.2	2
13	Lewis Fry Richardson: scienziato visionario e pacifista. *Lettera Matematica Pristem*, **2014**, 90, 23-30		2
12	Chaotic Lagrangian models for turbulent relative dispersion. *Physical Review E*, **2017**, 95, 043106	2.4	2
11	Resemblances and differences in mechanisms of noise-induced resonance. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 360, 261-273	3.3	2
10	Markov Chain Approach to a Process with Long-Time Memory. *Journal of Physical Oceanography*, **2003**, 33, 293-298	2.4	2
9	Effective equations for reaction coordinates in polymer transport. *Journal of Statistical Mechanics: Theory and Experiment*, **2020**, 2020, 013208	1.9	2
8	Translocation process of structured polypeptides across nanopores. *Spectroscopy*, **2010**, 24, 421-426		1
7	Comment on Linear Response of Hamiltonian Chaotic Systems as a Function of the Number of Degrees of Freedom *Physical Review Letters*, **1997**, 79, 1418-1418	7.4	1
6	Enrico Fermis contribution to non-linear systems: The influence of an unpublished article **2004**, 271-285		1
5	Role of Chaos for the Validity of Statistical Mechanics Laws: Diffusion and Conduction **2007**, 123-149		1
4	Thermalization without chaos in harmonic systems. *Physica A: Statistical Mechanics and Its Applications*, **2022**, 127581	3.3	1
3	Complexity of the minimum energy configurations. *Physical Review Letters*, **1995**, 75, 637-640	7.4	
2	Some Aspects of the Fractal Approach to the Fully Developed Turbulence **1989**, 31-47		
1	Chaos, Transport and Diffusion. *Understanding Complex Systems*, **2015**, 31-63	0.4	