Massimo Pica Ciamarra

List of Publications by Year
in descending order

102	1,866	279487	315357
papers	citations	23 h-index	38 g-index

103	103	103	1643
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamics of Drag and Force Distributions for Projectile Impact in a Granular Medium. Physical Review Letters, 2004, 92, 194301.	2.9	139
2	Nonequilibrium strongly hyperuniform fluids of circle active particles with large local density fluctuations. Science Advances, 2019, 5, eaau7423.	4.7	81
3	Jamming phase diagram for frictional particles. Physical Review E, 2011, 84, 041308.	0.8	76
4	Shear Instabilities in Granular Mixtures. Physical Review Letters, 2005, 94, 188001.	2.9	71
5	Thermodynamics and Statistical Mechanics of Dense Granular Media. Physical Review Letters, 2006, 97, 158001.	2.9	70
6	Granular Species Segregation under Vertical Tapping: Effects of Size, Density, Friction, and Shaking Amplitude. Physical Review Letters, 2006, 96, 058001.	2.9	69
7	Recent results on the jamming phase diagram. Soft Matter, 2010, 6, 2871.	1.2	56
8	Random Very Loose Packings. Physical Review Letters, 2008, 101, 128001.	2.9	53
9	From cage-jump motion to macroscopic diffusion in supercooled liquids. Soft Matter, 2014, 10, 5724-5728.	1.2	50
10	Particle jumps in structural glasses. Soft Matter, 2016, 12, 358-366.	1.2	50
11	Elasticity of compressed microgel suspensions. Soft Matter, 2013, 9, 5401.	1.2	44
12	Effective antibodies immobilization and functionalized nanoparticles in a quartz-crystal microbalance-based immunosensor for the detection of parathion. PLoS ONE, 2017, 12, e0171754.	1.1	40
13	Dynamic phase coexistence in glassâ€“forming liquids. Scientific Reports, 2015, 5, 11770.	1.6	39
14	Flow, Ordering, and Jamming of Sheared Granular Suspensions. Physical Review Letters, 2008, 100, 078001.	2.9	38
15	Unjamming Dynamics: The Micromechanics of a Seismic Fault Model. Physical Review Letters, 2010, 104, 238001.	2.9	38
16	Role of cell deformability in the two-dimensional melting of biological tissues. Physical Review Materials, 2018, 2, .	0.9	37
17	Statistical mechanics for static granular media: open questions. Soft Matter, 2012, 8, 9731.	1.2	33
18	Jamming at Zero Temperature, Zero Friction, and Finite Applied Shear Stress. Physical Review Letters, 2009, 103, 235701.	2.9	32

#	Article	IF	Citations
19	Attraction Tames Two-Dimensional Melting: From Continuous to Discontinuous Transitions. Physical Review Letters, 2020, 124, 218002.	2.9	30
20	Disordered jammed packings of frictionless spheres. Soft Matter, 2010, 6, 2975.	1.2	26
21	Cage-jump motion reveals universal dynamics and non-universal structural features in glass forming liquids. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 054050.	0.9	26
22	Cage Size and Jump Precursors in Glass-Forming Liquids: Experiment and Simulations. Journal of Physical Chemistry Letters, 2017, 8, 1562-1568.	2.1	26
23	Hexatic phase in a model of active biological tissues. Soft Matter, 2020, 16, 3914-3920.	1.2	26
24	Dynamic Weakening by Acoustic Fluidization during Stick-Slip Motion. Physical Review Letters, 2015, 115, 128001.	2.9	24
25	Mechanical disorder of sticky-sphere glasses. I. Effect of attractive interactions. Physical Review E, 2021, 103, 022605.	0.8	23
26	Dynamical arrest: interplay of glass and gel transitions. Soft Matter, 2014, 10, 4800.	1.2	22
27	Connecting short and long time dynamics in hard-sphere-like colloidal glasses. Soft Matter, 2015, 11, 622-626.	1.2	22
28	Dynamical Correlation Length and Relaxation Processes in a Glass Former. Physical Review Letters, 2011, 107, 065703.	2.9	21
29	Oscillatory Instabilities in Frictional Granular Matter. Physical Review Letters, 2019, 123, 098003.	2.9	21
30	Granular packs under vertical tapping: Structure evolution, grain motion, and dynamical heterogeneities. Physical Review E, 2007, 75, 021303.	0.8	20
31	Spatial correlations of elementary relaxation events in glass-forming liquids. Soft Matter, 2015, 11, 7214-7218.	1.2	20
32	Linker-mediated self-assembly of mobile DNA-coated colloids. Science Advances, 2020, 6, eaaz6921.	4.7	20
33	Entropy-controlled cross-linking in linker-mediated vitrimers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27111-27115.	3.3	19
34	Statistics of slipping event sizes in granular seismic fault models. Europhysics Letters, 2011, 95, 54002.	0.7	18
35	How one might miss early warning signals of critical transitions in time series data: A systematic study of two major currency pairs. PLoS ONE, 2018, 13, e0191439.	1.1	18
36	Long-wavelength fluctuations and anomalous dynamics in 2-dimensional liquids. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22977-22982.	3.3	18

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37	Reverse Janssen Effect in Narrow Granular Columns. Physical Review Letters, 2020, 124, 128002.	2.9	18
38	Self-Adaptation of Pseudomonas fluorescens Biofilms to Hydrodynamic Stress. Frontiers in Microbiology, 2020, 11, 588884.	1.5	17
39	Stability phase diagram of active Brownian particles. Physical Review Research, 2020, 2, .	1.3	17
40	Dynamically Induced Effective Interaction in Periodically Driven Granular Mixtures. Physical Review Letters, 2006, 97, 038001.	2.9	16
41	Role of Attractive Forces in the Relaxation Dynamics of Supercooled Liquids. Physical Review Letters, 2020, 124, 028001.	2.9	16
42	Quantum Reversibility and a New Model of Quantum Automaton. Lecture Notes in Computer Science, 2001, , 376-379.	1.0	15
43	Shear-induced segregation of a granular mixture under horizontal oscillation. Journal of Physics Condensed Matter, 2005, 17, S2549-S2556.	0.7	14
44	PACMAN PERCOLATION AND THE GLASS TRANSITION. Fractals, 2013, 21, 1350021.	1.8	14
45	â€˜Flow and jamâ€™ of frictional athermal systems under shear stress. Philosophical Magazine, 2011, 91, 2006-2013.	0.7	13
46	Rattler-induced aging dynamics in jammed granular systems. Soft Matter, 2017, 13, 9132-9137.	1.2	13
47	Phase behavior of Lennard-Jones particles in two dimensions. Physical Review E, 2020, 102, 062101.	0.8	13
48	Force percolation transition of jammed granular systems. Physical Review E, 2017, 96, 042901.	0.8	12
49	Many facets of intermittent dynamics in colloidal and molecular glasses. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 532, 87-96.	2.3	12
50	Controlled Viscosity in Dense Granular Materials. Physical Review Letters, 2018, 120, 138001.	2.9	12
51	Mechanical disorder of sticky-sphere glasses. II. Thermomechanical inannealability. Physical Review E, 2021, 103, 022606.	0.8	12
52	Solid-on-solid single-block dynamics under mechanical vibration. Physical Review E, 2012, 86, 016110.	0.8	11
53	High-order jamming crossovers and density anomalies. Soft Matter, 2013, 9, 9557.	1.2	11
54	Size and density avalanche scaling near jamming. Soft Matter, 2014, 10, 2728.	1.2	11

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55	Noise amplification in frictional systems: Oscillatory instabilities. Physical Review E, 2019, 100, 042901.	0.8	11
56	Accurate determination of the translational correlation function of two-dimensional solids. Physical Review E, 2019, 100, 062606.	0.8	11
57	Hyperuniformity and density fluctuations at a rigidity transition in a model of biological tissues. Soft Matter, 2020, 16, 5942-5950.	1.2	11
58	Unifying Description of the Vibrational Anomalies of Amorphous Materials. Physical Review Letters, 2021, 127, 215504.	2.9	10
59	Comment on â€œGranular Entropy: Explicit Calculations for Planar Assembliesâ€. Physical Review Letters, 2007, 99, 089401; author reply 089402.	2.9	9
60	Softness, anomalous dynamics, and fractal-like energy landscape in model cell tissues. Physical Review E, 2021, 103, 022607.	0.8	9
61	Correlations and Omori law in spamming. Europhysics Letters, 2008, 84, 28004.	0.7	8
62	Hidden Order Beyond Hyperuniformity in Critical Absorbing States. Physical Review Letters, 2021, 126, 118003.	2.9	8
63	Absence of â€˜fragilityâ€™ and mechanical response of jammed granular materials. Granular Matter, 2012, 14, 253-258.	1.1	7
64	The first jamming crossover: Geometric and mechanical features. Journal of Chemical Physics, 2013, 138, 12A529.	1.2	7
65	Universal behaviour of the glass and the jamming transitions in finite dimensions for hard spheres. Soft Matter, 2017, 13, 8766-8771.	1.2	7
66	Induced and endogenous acoustic oscillations in granular faults. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20170389.	1.6	7
67	Dynamics in two-dimensional glassy systems of crowded Penrose kites. Physical Review Materials, 2019, 3, .	0.9	7
68	On Edwardsâ€™ theory of powders. Physica A: Statistical Mechanics and Its Applications, 2004, 339, 1-6.	1.2	6
69	In-silico modeling of early-stage biofilm formation. Soft Materials, 2021, 19, 346-358.	0.8	6
70	GRANULAR FAILURE: THE ORIGIN OF EARTHQUAKES?. International Journal of Modern Physics B, 2009, 23, 5374-5382.	1.0	5
71	The Role of Interstitial Impurities in the Frictional Instability of Seismic Fault Models. Tribology Letters, 2012, 48, 89-94.	1.2	5
72	Non-monotonic dependence of the friction coefficient on heterogeneous stiffness. Scientific Reports, 2014, 4, 6772.	1.6	5

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73	Local Plastic Response and Slow Heterogeneous Dynamics of Supercooled Liquids. Physical Review Letters, 2022, 128, .	2.9	5
74	Cluster structure and dynamics in gels and glasses. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 074011.	0.9	4
75	Simple and Flexible Model for Laser-Driven Antibodyâ€“Gold Surface Interactions: Functionalization and Sensing. ACS Applied Materials & Interfaces, 2016, 8, 21762-21769.	4.0	4
76	Frictional active Brownian particles. Physical Review E, 2020, 102, 032612.	0.8	4
77	Transition from Static to Dynamic Friction in an Array of Frictional Disks. Physical Review Letters, 2020, 124, 030602.	2.9	4
78	Statistical mechanics of dense granular media. Journal of Physics Condensed Matter, 2005, 17, S2557-S2572.	0.7	3
79	Emergence of linear elasticity from the atomistic description of matter. Journal of Chemical Physics, 2016, 145, 054507.	1.2	3
80	Relaxation functions and dynamical heterogeneities in a model of chemical gel interfering with glass transition. European Physical Journal: Special Topics, 2017, 226, 323-329.	1.2	3
81	Escape rate and diffusion of a Stochastically Driven particle. Scientific Reports, 2017, 7, 41442.	1.6	3
82	Synchronized oscillations and acoustic fluidization in confined granular materials. Physical Review E, 2018, 97, 010901.	0.8	3
83	Designing Phononic Band Gaps With Sticky Potentials. Frontiers in Physics, 2021, 9, .	1.0	3
84	Emergence of linear isotropic elasticity in amorphous and polycrystalline materials. Physical Review E, 2021, 103, 052606.	0.8	3
85	Long-wavelength fluctuations and dimensionality crossover in confined liquids. Physical Review Research, 2021, 3, .	1.3	3
86	Mismatched ligand density enables ordered assembly of mixed-dimensional, cross-species materials. Science Advances, 2022, 8, .	4.7	3
87	Interplay between jamming and motility-induced phase separation in persistent self-propelling particles. Physical Review E, 2022, 106, .	0.8	3
88	UNIVERSALITY IN CITY MORPHOLOGY AND THE MORPHOLOGY OF A CITY AND ITS IMPLICATIONS FOR CITY EVACUATION PLANS. International Journal of Modeling, Simulation, and Scientific Computing, 2007, 10, 373-377.	0.9	2
89	Dynamics and instantaneous normal modes in a liquid with density anomalies. Journal of Physics Condensed Matter, 2015, 27, 194128.	0.7	2
90	Elastic models of the glass transition applied to a liquid with density anomalies. Journal of Non-Crystalline Solids, 2015, 407, 23-28.	1.5	2

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91	Unconventional rheological properties in systems of deformable particles. Soft Matter, 2021, 17, 7708-7713.	1.2	2
92	Random walk, cluster growth, and the morphology of urban conglomerations. Physica A: Statistical Mechanics and Its Applications, 2006, 363, 551-557.	1.2	1
93	STATISTICAL MECHANICS OF STATIC GRANULAR PACKINGS UNDER GRAVITY. International Journal of Modern Physics B, 2009, 23, 5345-5358.	1.0	1
94	Commentary on â€œEffect of temperature on a granular pileâ€• Papers in Physics, 2010, 2, .	0.2	1
95	Unifying description of the damping regimes of a stochastic particle in a periodic potential. SciPost Physics, 2017, 3, .	1.5	1
96	Liquid to supercooled-liquid crossover from a Boltzmann transport approach to escape and diffusion. Journal of Physics Condensed Matter, 2021, 33, 104007.	0.7	1
97	COMPLEX FLOW IN GRANULAR MEDIA. International Journal of Modeling, Simulation, and Scientific Computing, 2010, 13, 339-347.	0.9	0
98	Density anomalies and high-order jamming crossovers. , 2013, , .		0
99	Nonaffinity in amorphous solids close to the jamming transition. EPJ Web of Conferences, 2017, 140, 02003.	0.1	0
100	Cluster approach to phase transitions from fluid to amorphous solids: gels, glasses and granular materials. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 384005.	0.7	0
101	Jamming as a random first-order percolation transition. Physica A: Statistical Mechanics and Its Applications, 2021, 569, 125796.	1.2	0
102	Hidden-state modeling of a cross-section of geoelectric time series data can provide reliable intermediate-term probabilistic earthquake forecasting in Taiwan. Natural Hazards and Earth System Sciences, 2022, 22, 1931-1954.	1.5	0