

Bulbul Chakraborty

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

2,217
citations

279798

23
h-index

214800

47
g-index

55
all docs

55
docs citations

55
times ranked

1500
citing authors

#	ARTICLE	IF	CITATIONS
1	Jamming by shear. <i>Nature</i> , 2011, 480, 355-358.	27.8	530
2	The physics of jamming for granular materials: a review. <i>Reports on Progress in Physics</i> , 2019, 82, 012601.	20.1	162
3	Quantum Motion of Chemisorbed Hydrogen on Ni Surfaces. <i>Physical Review Letters</i> , 1983, 51, 1081-1084.	7.8	156
4	Jamming in Systems Composed of Frictionless Ellipse-Shaped Particles. <i>Physical Review Letters</i> , 2009, 102, 255501.	7.8	117
5	Statistical mechanics framework for static granular matter. <i>Physical Review E</i> , 2009, 79, 061301.	2.1	112
6	Entropy and Temperature of a Static Granular Assembly: An <i>Ab Initio</i> Approach. <i>Physical Review Letters</i> , 2007, 99, 038002.	7.8	110
7	The Statistical Physics of Athermal Materials. <i>Annual Review of Condensed Matter Physics</i> , 2015, 6, 63-83.	14.5	102
8	Electron and positron response to atomic defects in solids: A theoretical study of the monovacancy and divacancy in aluminum. <i>Physical Review B</i> , 1983, 27, 4535-4552.	3.2	75
9	Jamming as a Critical Phenomenon: A Field Theory of Zero-Temperature Grain Packings. <i>Physical Review Letters</i> , 2005, 95, 198002.	7.8	63
10	Constraints and vibrations in static packings of ellipsoidal particles. <i>Physical Review E</i> , 2012, 85, 061305.	2.1	54
11	Shear jamming and fragility in dense suspensions. <i>Granular Matter</i> , 2019, 21, 1.	2.2	48
12	Positron annihilation in the high-T _c superconductors. <i>Physical Review B</i> , 1989, 39, 215-221.	3.2	44
13	Spiral phases and time-reversal-violating resonating-valence-bond states of doped antiferromagnets. <i>Physical Review B</i> , 1990, 42, 4819-4822.	3.2	44
14	Origin of Rigidity in Dry Granular Solids. <i>Physical Review Letters</i> , 2013, 111, 068301.	7.8	43
15	Protocol dependence of the jamming transition. <i>Physical Review E</i> , 2016, 93, 012901.	2.1	42
16	Signatures of incipient jamming in collisional hopper flows. <i>Soft Matter</i> , 2013, 9, 5016.	2.7	34
17	Numerical test of the Edwards conjecture shows that all packings are equally probable at jamming. <i>Nature Physics</i> , 2017, 13, 848-851.	16.7	34
18	Microscopic Origin of Frictional Rheology in Dense Suspensions: Correlations in Force Space. <i>Physical Review Letters</i> , 2018, 121, 128002.	7.8	33

#	ARTICLE	IF	CITATIONS
19	Statistical ensemble approach to stress transmission in granular packings. <i>Soft Matter</i> , 2010, 6, 2884.	2.7	32
20	Monte Carlo study of a compressible Ising antiferromagnet on a triangular lattice. <i>Physical Review B</i> , 1996, 53, 11985-11992.	3.2	30
21	Atomistic Landau theory of ordering and modulated phases in Cu-Au alloys. <i>Physical Review Letters</i> , 1992, 68, 2039-2042.	7.8	28
22	Shear-induced rigidity of frictional particles: Analysis of emergent order in stress space. <i>Physical Review E</i> , 2016, 93, 042901.	2.1	28
23	Emergent Elasticity in Amorphous Solids. <i>Physical Review Letters</i> , 2020, 125, 118002.	7.8	26
24	Arrested states in persistent active matter: Gelation without attraction. <i>Physical Review Research</i> , 2020, 2, .	3.6	22
25	Phase and frequency entrainment in locally coupled phase oscillators with repulsive interactions. <i>Physical Review E</i> , 2011, 83, 046206.	2.1	20
26	Ergodicity breaking dynamics of arch collapse. <i>Physical Review E</i> , 2018, 97, 040901.	2.1	17
27	Shear-induced rigidity in athermal materials: A unified statistical framework. <i>Physical Review E</i> , 2015, 91, 042201.	2.1	16
28	Stress Response of Granular Systems. <i>Journal of Statistical Physics</i> , 2017, 169, 1-17.	1.2	14
29	Dilatancy, shear jamming, and a generalized jamming phase diagram of frictionless sphere packings. <i>Soft Matter</i> , 2021, 17, 3121-3127.	2.7	14
30	Athermal Fluctuations in Disordered Crystals. <i>Physical Review Letters</i> , 2020, 124, 168004.	7.8	13
31	Kinetics of ordering in fluctuation-driven first-order transitions: Simulation and theory. <i>Physical Review E</i> , 2000, 62, 6116-6125.	2.1	12
32	Entropy-Vanishing Transition and Glassy Dynamics in Frustrated Spins. <i>Physical Review Letters</i> , 2001, 86, 2058-2061.	7.8	12
33	Fluctuations in shear-jammed states: A statistical ensemble approach. <i>Europhysics Letters</i> , 2013, 102, 34002.	2.0	12
34	Scaling Theory for the Frictionless Unjamming Transition. <i>Physical Review Letters</i> , 2017, 118, 138001.	7.8	12
35	Motion of active tracer in a lattice gas with cross-shaped particles. <i>Journal of Chemical Physics</i> , 2019, 150, 144508.	3.0	12
36	Jamming of Granular Matter. , 2009, , 4997-5021.		10

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37	Investigating the nature of discontinuous shear thickening: Beyond a mean-field description. Journal of Rheology, 2020, 64, 329-341.	2.6	10
38	Disordered contact networks in jammed packings of frictionless disks. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 114002.	2.3	9
39	Theory of microphase separation in bidisperse chiral membranes. Physical Review E, 2017, 96, 012704.	2.1	8
40	Synchronization patterns in geometrically frustrated rings of relaxation oscillators. Chaos, 2015, 25, 123109.	2.5	6
41	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \rangle K \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -core analysis of shear-thickening suspensions. Physical Review Fluids, 2022, 7, .	2.5	6
42	Discommensurations in icosahedral phases. Physical Review B, 1986, 34, 8202-8206.	3.2	5
43	Ising model with frustration, elasticity, and competing interactions. Journal of Statistical Physics, 1996, 83, 739-749.	1.2	5
44	Microscopic modeling of the growth of order in an alloy: Nucleated and continuous ordering. Physical Review B, 1996, 53, 5063-5066.	3.2	5
45	Glassy dynamics in a frustrated spin system: the role of defects. Journal of Physics Condensed Matter, 2000, 12, 6487-6495.	1.8	5
46	Shear-induced organization of forces in dense suspensions: signatures of discontinuous shear thickening. EPJ Web of Conferences, 2017, 140, 09045.	0.3	5
47	Timescale divergence at the shear jamming transition. Granular Matter, 2020, 22, 1.	2.2	5
48	Influence of modulated structures on ordering dynamics in CuAu. Physica A: Statistical Mechanics and Its Applications, 1996, 224, 113-127.	2.6	4
49	Critical Dynamics of Dimers: Implications for the Glass Transition. Journal of Physical Chemistry B, 2005, 109, 21413-21418.	2.6	3
50	Gaps between avalanches in one-dimensional random-field Ising models. Physical Review E, 2017, 96, 032107.	2.1	3
51	Stress fluctuations in transient active networks. Soft Matter, 2019, 15, 3520-3526.	2.7	3
52	Effective field theory of the zero-temperature triangular-lattice antiferromagnet: A Monte Carlo study. Physical Review E, 2000, 61, 6426-6433.	2.1	2
53	Quantum Motion of Chemisorbed Hydrogen. Studies in Surface Science and Catalysis, 1986, 26, 313-315.	1.5	0
54	Glassy and Crystalline States in a Model without Disorder: Spin Analog of a Structural Glass. Materials Research Society Symposia Proceedings, 1996, 455, 229.	0.1	0

#	ARTICLE	IF	CITATIONS
55	High frequency response and weak ergodicity breaking in a simple free energy landscape. , 1999, , .		0