Yair Shokef

List of Publications by Year
in descending order

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60	1,589	394421	302126
papers	citations	19 h-index	39 g-index

61	61	61	1652
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Combinatorial design of textured mechanical metamaterials. Nature, 2016, 535, 529-532.	27.8	289
2	Geometric frustration in buckled colloidal monolayers. Nature, 2008, 456, 898-903.	27.8	199
3	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. Physics of Plasmas, 2005, 12, 032702.	1.9	126
4	Effective Temperature of Red-Blood-Cell Membrane Fluctuations. Physical Review Letters, 2011, 106, 238103.	7.8	125
5	Multidimensional analysis of direct-drive, plastic-shell implosions on OMEGA. Physics of Plasmas, 2005, 12, 056307.	1.9	95
6	Scaling Laws for the Response of Nonlinear Elastic Media with Implications for Cell Mechanics. Physical Review Letters, 2012, 108, 178103.	7.8	51
7	Role of friction in compaction and segregation of granular materials. Physical Review E, 2003, 68, 061301.	2.1	50
8	Topological defects produce exotic mechanics in complex metamaterials. Nature Physics, 2020, 16, 307-311.	16.7	36
9	Stripes, Zigzags, and Slow Dynamics in Buckled Hard Spheres. Physical Review Letters, 2009, 102, 048303.	7.8	34
10	A general buoyancyâ€“drag model for the evolution of the Rayleighâ€“Taylor and Richtmyerâ€“Meshkov instabilities. Laser and Particle Beams, 2003, 21, 347-353.	1.0	33
11	Non-Newtonian Topological Mechanical Metamaterials Using Feedback Control. Physical Review Letters, 2020, 125, 256802.	7.8	33
12	Optical and plasma smoothing of laser imprinting in targets driven by lasers with SSD bandwidths up to 1 THz. Physics of Plasmas, 2001, 8, 2331-2337.	1.9	31
13	Exactly Solvable Model for Driven Dissipative Systems. Physical Review Letters, 2004, 93, 240601.	7.8	31
14	Order by disorder in the antiferromagnetic Ising model on an elastic triangular lattice. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11804-11809.	7.1	27
15	Response of adherent cells to mechanical perturbations of the surrounding matrix. Soft Matter, 2015, 11, 1412-1424.	2.7	24
16	Nonlinear evolution of broad-bandwidth, laser-imprinted nonuniformities in planar targets accelerated by 351-nm laser light. Physics of Plasmas, 1999, 6, 4022-4036.	1.9	22
17	Arrested states in persistent active matter: Gelation without attraction. Physical Review Research, 2020, 2, .	3.6	22
18	Fluctuation-dissipation relations in driven dissipative systems. Physical Review E, 2006, 73, 046132.	2.1	21

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19	Frequency-dependent fluctuation-dissipation relations in granular gases. Physical Review E, 2008, 77, 051301.	2.1	21
20	Real-time steering of curved sound beams in a feedback-based topological acoustic metamaterial. Mechanical Systems and Signal Processing, 2021, 153, 107479.	8.0	20
21	Jamming mechanisms and density dependence in a kinetically constrained model. Europhysics Letters, 2010, 90, 26005.	2.0	18
22	Nonequilibrium Statistical Mechanics of Dividing Cell Populations. Physical Review Letters, 2007, 99, 138102.	7.8	17
23	Mechanical Interaction between Cells Facilitates Molecular Transport. Advanced Biology, 2019, 3, e1900192.	3.0	16
24	Shape regulation generates elastic interaction between living cells. New Journal of Physics, 2017, 19, 063011.	2.9	15
25	Energy distribution and effective temperatures in a driven dissipative model. Physical Review E, 2006, 74, 051111.	2.1	14
26	Isolated nonequilibrium systems in contact. Physical Review E, 2007, 76, 030101.	2.1	14
27	Randomness-induced redistribution of vibrational frequencies in amorphous solids. Physical Review B, 2009, 80, .	3.2	14
28	Scaling in the shockâ€“bubble interaction. Laser and Particle Beams, 2003, 21, 335-339.	1.0	12
29	Motion of active tracer in a lattice gas with cross-shaped particles. Journal of Chemical Physics, 2019, 150, 144508.	3.0	12
30	Elastic interactions between anisotropically contracting circular cells. Physical Review E, 2019, 99, 032418.	2.1	12
31	Jamming percolation in three dimensions. Europhysics Letters, 2014, 106, 16003.	2.0	11
32	Studies in the nonlinear evolution of the Rayleighâ€“Taylor and Richtmyerâ€“Meshkov instabilities and their role in inertial confinement fusion. Laser and Particle Beams, 1999, 17, 465-475.	1.0	10
33	Hydrodynamics in kinetically constrained lattice-gas models. Physical Review E, 2017, 95, 022124.	2.1	10
34	Attraction Controls the Inversion of Order by Disorder in Buckled Colloidal Monolayers. Physical Review Letters, 2017, 118, 218002.	7.8	10
35	Jamming transition of kinetically constrained models in rectangular systems. Physical Review E, 2012, 86, 051133.	2.1	9
36	Buckled colloidal monolayers connect geometric frustration in soft and hard matter. Soft Matter, 2013, 9, 6565.	2.7	9

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37	Jamming by shape in kinetically constrained models. Physical Review E, 2014, 89, 032204.	2.1	8
38	Response evolution of mechanical metamaterials under architectural transformations. New Journal of Physics, 2020, 22, 023030.	2.9	8
39	Relation between structure of blocked clusters and relaxation dynamics in kinetically constrained models. Physical Review E, 2015, 92, 032133.	2.1	7
40	Mean-field interactions between living cells in linear and nonlinear elastic matrices. Physical Review E, 2021, 104, 024411.	2.1	7
41	Jamming versus caging in three dimensional jamming percolation. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 054051.	2.3	6
42	Topology Restricts Quasidegeneracy in Sheared Square Colloidal Ice. Physical Review Letters, 2020, 124, 238003.	7.8	6
43	Putting a spin on metamaterials: Mechanical incompatibility as magnetic frustration. SciPost Physics, 2021, 10, .	4.9	6
44	Topologically protected steady cycles in an icelike mechanical metamaterial. Physical Review Research, 2021, 3, .	3.6	6
45	Introduction to force transmission by nonlinear biomaterials. Soft Matter, 2021, 17, 10172-10176.	2.7	6
46	Target finding in fibrous biological environments. New Journal of Physics, 2020, 22, 103008.	2.9	5
47	Finite-density effects in the Fredrickson-Andersen and Kob-Andersen kinetically-constrained models. Journal of Chemical Physics, 2014, 141, 064110.	3.0	4
48	Attraction Controls the Entropy of Fluctuations in Isosceles Triangular Networks. Entropy, 2018, 20, 122.	2.2	4
49	Modeling turbulent mixing in inertial confinement fusion implosions. Laser and Particle Beams, 2003, 21, 355-361.	1.0	3
50	Comment on â€œTemperature in Nonequilibrium Systems with Conserved Energyâ€• Physical Review Letters, 2005, 94, 208901; author reply 208902.	7.8	3
51	Single-loop-like energy oscillations and staircase vortex occupation in superconducting double networks. Physical Review B, 2011, 84, .	3.2	3
52	Studying Hydrodynamic Instability Using Shock-Tube Experiments. Astrophysics and Space Science, 2005, 298, 305-312.	1.4	2
53	Kinetically constrained model for gravity-driven granular flow and clogging. Physical Review E, 2019, 100, 032137.	2.1	2
54	Feedback-based Topological Mechanical Metamaterials. , 2020, , .		1

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55	Fluctuation-Dissipation Relations in Minimal Models for Active Driving. Biophysical Journal, 2011, 100, 596a.	0.5	0
56	Fluxoid quantization effects in high-T_csuperconducting double networks. Journal of Physics: Conference Series, 2012, 400, 022109.	0.4	0
57	Dichotomic fluxoid quantization effects in a superconducting double network. Journal of Physics: Conference Series, 2012, 400, 022110.	0.4	0
58	Nonlinear Elasticity in the Interaction of Living Cells with their Mechanical Environment. Biophysical Journal, 2013, 104, 479a.	0.5	0
59	Multiple peaks in the displacement distribution of active random walkers. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 113209.	2.3	0
60	Constraint relaxation leads to jamming. Physical Review E, 2020, 102, 062155.	2.1	0