Andrew D Rutenberg

List of Publications by Year
in descending order

76	2,161	304743 22	243625 44
papers	citations	h-index	g-index

81	81	81	2581
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Classical antiferromagnets on the KagomÃ© lattice. Physical Review B, 1992, 45, 7536-7539.	3.2	257
2	Dynamic Compartmentalization of Bacteria: Accurate Division inE. Coli. Physical Review Letters, 2001, 87, 278102.	7.8	164
3	Microbial response to surface microtopography: the role of metabolism in localized mineral dissolution. Chemical Geology, 2001, 180, 19-32.	3.3	131
4	Growth laws for phase ordering. Physical Review E, 1994, 49, R27-R30.	2.1	110
5	Fast and accurate coarsening simulation with an unconditionally stable time step. Physical Review E, 2003, 68, 066703.	2.1	104
6	The degree of frailty as a translational measure of health in aging. Nature Aging, 2021, 1, 651-665.	11.6	104
7	Pattern Formation inside Bacteria: Fluctuations due to the Low Copy Number of Proteins. Physical Review Letters, 2003, 90, 128102.	7.8	102
8	Aging, frailty and complex networks. Biogerontology, 2017, 18, 433-446.	3.9	94
9	Effects of Poly(<scp>l</scp>-lysine) Substrates on Attached Escherichia coli Bacteria. Langmuir, 2010, 26, 2639-2644.	3.5	78
10	Energy-scaling approach to phase-ordering growth laws. Physical Review E, 1995, 51, 5499-5514.	2.1	75
11	Unifying aging and frailty through complex dynamical networks. Experimental Gerontology, 2018, 107, 126-129.	2.8	71
12	Phase-ordering kinetics of one-dimensional nonconserved scalar systems. Physical Review E, 1994, 50, 1900-1911.	2.1	59
13	PEX16 contributes to peroxisome maintenance by constantly trafficking PEX3 via the ER. Journal of Cell Science, 2014, 127, 3675-86.	2.0	53
14	Network model of human aging: Frailty limits and information measures. Physical Review E, 2016, 94, 052409.	2.1	44
15	Temperature Dependence of MinD Oscillation in Escherichia coli : Running Hot and Fast. Journal of Bacteriology, 2006, 188, 7661-7667.	2.2	43
16	An equilibrium double-twist model for the radial structure of collagen fibrils. Soft Matter, 2014, 10, 8500-8511.	2.7	37
17	Dynamical scaling: The two-dimensionalXYmodel following a quench. Physical Review E, 1999, 60, 212-221.	2.1	36
18	Î±TAT1 controls longitudinal spreading of acetylation marks from open microtubules extremities. Scientific Reports, 2016, 6, 35624.	3.3	35

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19	Dynamical network model for age-related health deficits and mortality. Physical Review E, 2016, 93, 022309.	2.1	33
20	Clocking Out: Modeling Phage-Induced Lysis of Escherichia coli. Journal of Bacteriology, 2007, 189, 4749-4755.	2.2	30
21	Phase ordering of two-dimensionalXYsystems below the Kosterlitz-Thouless transition temperature. Physical Review E, 1995, 51, R1641-R1644.	2.1	29
22	Persistence, Poisoning, and Autocorrelations in Dilute Coarsening. Physical Review Letters, 1997, 79, 4842-4845.	7.8	27
23	Quantification of Fluorophore Copy Number from Intrinsic Fluctuations during Fluorescence Photobleaching. Biophysical Journal, 2011, 101, 2284-2293.	0.5	24
24	Unwinding Scaling Violations in Phase Ordering. Physical Review Letters, 1995, 74, 3836-3839.	7.8	20
25	Curved tails in polymerization-based bacterial motility. Physical Review E, 2001, 64, 021904.	2.1	18
26	Heterocyst patterns without patterning proteins in cyanobacterial filaments. Developmental Biology, 2007, 312, 427-434.	2.0	18
27	Polymorphism of stable collagen fibrils. Soft Matter, 2018, 14, 4772-4783.	2.7	18
28	Anisotropic Coarsening: Grain Shapes and Nonuniversal Persistence. Physical Review Letters, 1999, 83, 3772-3775.	7.8	17
29	Nonequilibrium phase ordering with a global conservation law. Physical Review E, 1996, 54, 972-973.	2.1	16
30	PEX5 and Ubiquitin Dynamics on Mammalian Peroxisome Membranes. PLoS Computational Biology, 2014, 10, e1003426.	3.2	16
31	Probing the network structure of health deficits in human aging. Physical Review E, 2018, 98, .	2.1	16
32	Scaling violations with textures in two-dimensional phase ordering. Physical Review E, 1995, 51, R2715-R2718.	2.1	15
33	Triangular anisotropies in driven diffusive systems: Reconciliation of up and down. Physical Review E, 1999, 60, 2710-2715.	2.1	15
34	A storage-based model of heterocyst commitment and patterning in cyanobacteria. Physical Biology, 2014, 11, 016001.	1.8	15
35	Maximally fast coarsening algorithms. Physical Review E, 2005, 72, 055701.	2.1	14
36	Stress-free spatial anisotropy in phase ordering. Physical Review E, 1996, 54, R2181-R2184.	2.1	13

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37	Self-organization of the MinE protein ring in subcellular Min oscillations. Physical Review E, 2009, 80, 011922.	2.1	12
38	Cluster persistence: A discriminating probe of soap froth dynamics. Europhysics Letters, 2000, 51, 223-229.	2.0	11
39	Bayesian counting of photobleaching steps with physical priors. Journal of Chemical Physics, 2020, 152, 024110.	3.0	11
40	The potential for complex computational models of aging. Mechanisms of Ageing and Development, 2021, 193, 111403.	4.6	11
41	Non-equilibrium growth and twist of cross-linked collagen fibrils. Soft Matter, 2021, 17, 1415-1427.	2.7	10
42	Phase-field collagen fibrils: Coupling chirality and density modulations. Physical Review Research, 2020, 2, .	3.6	10
43	Subcellular Min Oscillations as a Single-Cell Reporter of the Action of Polycations, Protamine, and Gentamicin on Escherichia coli. PLoS ONE, 2009, 4, e7285.	2.5	10
44	Interpretable machine learning for high-dimensional trajectories of aging health. PLoS Computational Biology, 2022, 18, e1009746.	3.2	10
45	Dynamical multiscaling in quenched Skyrme systems. Europhysics Letters, 1997, 39, 49-54.	2.0	9
46	Generating synthetic aging trajectories with a weighted network model using cross-sectional data. Scientific Reports, 2020, 10, 19833.	3.3	9
47	Informative frailty indices from binarized biomarkers. Biogerontology, 2020, 21, 345-355.	3.9	9
48	Steady-state helices of the actin homolog MreB inside bacteria: Dynamics without motors. Physical Review E, 2007, 76, 031916.	2.1	8
49	Pulling Helices inside Bacteria: Imperfect Helices and Rings. Physical Review Letters, 2009, 102, 158105.	7.8	8
50	Reconciling cyanobacterial fixed-nitrogen distributions and transport experiments with quantitative modelling. Physical Biology, 2012, 9, 016007.	1.8	8
51	Stuttering Min oscillations withinE. colibacteria: a stochastic polymerization model. Physical Biology, 2012, 9, 056003.	1.8	8
52	Strategies for handling missing data that improve Frailty Index estimation and predictive power: lessons from the NHANES dataset. GeroScience, 2022, 44, 897-923.	4.6	8
53	Scaling state of dry two-dimensional froths: Universal angle-deviations and structure. Physical Review E, 2006, 73, 011403.	2.1	7
54	Heterocyst placement strategies to maximize the growth of cyanobacterial filaments. Physical Biology, 2012, 9, 046002.	1.8	7

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55	Modeling partitioning of Min proteins between daughter cells after septation inEscherichia coli. Physical Biology, 2007, 4, 145-153.	1.8	6
56	D-band strain underestimates fibril strain for twisted collagen fibrils at low strains. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104854.	3.1	5
57	Uniform spatial distribution of collagen fibril radii within tendon implies local activation of pC-collagen at individual fibrils. Physical Biology, 2016, 13, 046008.	1.8	4
58	Single file diffusion into a semi-infinite tube. Physical Biology, 2015, 12, 064001.	1.8	3
59	Cluster coarsening on drops exhibits strong and sudden size-selectivity. Soft Matter, 2015, 11, 3786-3793.	2.7	3
60	Photobleaching of randomly rotating fluorescently decorated particles. Journal of Chemical Physics, 2017, 147, 104105.	3.0	3
61	A quantile frailty index without dichotomization. Mechanisms of Ageing and Development, 2021, 199, 111570.	4.6	3
62	Comment on â€œTheory of Spinodal Decompositionâ€• Physical Review Letters, 1996, 76, 158-158.	7.8	2
63	Monodisperse domains by proteolytic control of the coarsening instability. Physical Review E, 2011, 84, 011928.	2.1	2
64	Circumferential gap propagation in an anisotropic elastic bacterial sacculus. Physical Review E, 2014, 89, 012704.	2.1	2
65	A Model of Autophagy Size Selectivity by Receptor Clustering on Peroxisomes. Frontiers in Physics, 2017, 5, .	2.1	2
66	Chiral phase-coexistence in compressed double-twist elastomers. Soft Matter, 2021, 17, 5018-5024.	2.7	2
67	Reaction zones and quenched charged-particle systems with long-range interactions. Physical Review E, 1998, 58, 2918-2930.	2.1	1
68	Diffusion of Asymmetric Swimmers. Physical Review Letters, 2003, 91, 080601.	7.8	1
69	Anomalously slow transport in single-file diffusion with slow binding kinetics. Physical Review E, 2018, 98, 022114.	2.1	1
70	Interpretable Machine Learning of High-Dimensional Aging Health Trajectories. Innovation in Aging, 2021, 5, 676-676.	0.1	1
71	Clocking Out: Modeling Phage-Induced Lysis of Escherichia coli. Journal of Bacteriology, 2007, 189, 6506-6506.	2.2	0
72	Protein translocation without specific quality control in a computational model of the Tat system. Physical Biology, 2014, 11, 056005.	1.8	0

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73	Lateral Exchange Smooths the Way for Vimentin Filaments. Biophysical Journal, 2014, 107, 2747-2748.	0.5	0
74	Unlocking Collagen Proteolysis with a Gentle Pull. Biophysical Journal, 2018, 114, 503-504.	0.5	0
75	UNDERSTANDING AGING AND FRAILTY WITH A PREDICTIVE NETWORK MODEL. Innovation in Aging, 2019, 3, S684-S684.	0.1	0
76	Non-Fickian single-file pore transport. Physical Review E, 2021, 104, L032102.	2.1	0