Andrew D Rutenberg

List of Publications by Year
in descending order

76 papers	2,161 citations	304743 22 h-index	243625 44 g-index
81 all docs	81 docs citations	81 times ranked	2581 citing authors

#	Article	IF	Citations
1	Interpretable machine learning for high-dimensional trajectories of aging health. PLoS Computational Biology, 2022, 18, e1009746.	3.2	10
2	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
3	The potential for complex computational models of aging. Mechanisms of Ageing and Development, 2021, 193, 111403.	4.6	11
4	Non-equilibrium growth and twist of cross-linked collagen fibrils. Soft Matter, 2021, 17, 1415-1427.	2.7	10
5	The degree of frailty as a translational measure of health in aging. Nature Aging, 2021, 1, 651-665.	11.6	104
6	Non-Fickian single-file pore transport. Physical Review E, 2021, 104, L032102.	2.1	0
7	A quantile frailty index without dichotomization. Mechanisms of Ageing and Development, 2021, 199, 111570.	4.6	3
8	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
9	Chiral phase-coexistence in compressed double-twist elastomers. Soft Matter, 2021, 17, 5018-5024.	2.7	2
10	Interpretable Machine Learning of High-Dimensional Aging Health Trajectories. Innovation in Aging, 2021, 5, 676-676.	0.1	1
11	Generating synthetic aging trajectories with a weighted network model using cross-sectional data. Scientific Reports, 2020, 10, 19833.	3.3	9
12	Informative frailty indices from binarized biomarkers. Biogerontology, 2020, 21, 345-355.	3.9	9
13	Bayesian counting of photobleaching steps with physical priors. Journal of Chemical Physics, 2020, 152, 024110.	3.0	11
14	Phase-field collagen fibrils: Coupling chirality and density modulations. Physical Review Research, 2020, 2, .	3.6	10
15	UNDERSTANDING AGING AND FRAILTY WITH A PREDICTIVE NETWORK MODEL. Innovation in Aging, 2019, 3, S684-S684.	0.1	0
16	Unlocking Collagen Proteolysis with a Gentle Pull. Biophysical Journal, 2018, 114, 503-504.	0.5	0
17	Unifying aging and frailty through complex dynamical networks. Experimental Gerontology, 2018, 107, 126-129.	2.8	71
18	Probing the network structure of health deficits in human aging. Physical Review E, 2018, 98, .	2.1	16

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19	Polymorphism of stable collagen fibrils. Soft Matter, 2018, 14, 4772-4783.	2.7	18
20	Anomalously slow transport in single-file diffusion with slow binding kinetics. Physical Review E, 2018, 98, 022114.	2.1	1
21	Aging, frailty and complex networks. Biogerontology, 2017, 18, 433-446.	3.9	94
22	Photobleaching of randomly rotating fluorescently decorated particles. Journal of Chemical Physics, 2017, 147, 104105.	3.0	3
23	A Model of Autophagy Size Selectivity by Receptor Clustering on Peroxisomes. Frontiers in Physics, 2017, 5, .	2.1	2
24	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
25	Î±TAT1 controls longitudinal spreading of acetylation marks from open microtubules extremities. Scientific Reports, 2016, 6, 35624.	3.3	35
26	Dynamical network model for age-related health deficits and mortality. Physical Review E, 2016, 93, 022309.	2.1	33
27	Network model of human aging: Frailty limits and information measures. Physical Review E, 2016, 94, 052409.	2.1	44
28	Single file diffusion into a semi-infinite tube. Physical Biology, 2015, 12, 064001.	1.8	3
29	Cluster coarsening on drops exhibits strong and sudden size-selectivity. Soft Matter, 2015, 11, 3786-3793.	2.7	3
30	Protein translocation without specific quality control in a computational model of the Tat system. Physical Biology, 2014, 11, 056005.	1.8	0
31	PEX5 and Ubiquitin Dynamics on Mammalian Peroxisome Membranes. PLoS Computational Biology, 2014, 10, e1003426.	3.2	16
32	Lateral Exchange Smooths the Way for Vimentin Filaments. Biophysical Journal, 2014, 107, 2747-2748.	0.5	0
33	Circumferential gap propagation in an anisotropic elastic bacterial sacculus. Physical Review E, 2014, 89, 012704.	2.1	2
34	PEX16 contributes to peroxisome maintenance by constantly trafficking PEX3 via the ER. Journal of Cell Science, 2014, 127, 3675-86.	2.0	53
35	A storage-based model of heterocyst commitment and patterning in cyanobacteria. Physical Biology, 2014, 11, 016001.	1.8	15
36	An equilibrium double-twist model for the radial structure of collagen fibrils. Soft Matter, 2014, 10, 8500-8511.	2.7	37

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37	Reconciling cyanobacterial fixed-nitrogen distributions and transport experiments with quantitative modelling. Physical Biology, 2012, 9, 016007.	1.8	8
38	Stuttering Min oscillations withinE. colibacteria: a stochastic polymerization model. Physical Biology, 2012, 9, 056003.	1.8	8
39	Heterocyst placement strategies to maximize the growth of cyanobacterial filaments. Physical Biology, 2012, 9, 046002.	1.8	7
40	Quantification of Fluorophore Copy Number from Intrinsic Fluctuations during Fluorescence Photobleaching. Biophysical Journal, 2011, 101, 2284-2293.	0.5	24
41	Monodisperse domains by proteolytic control of the coarsening instability. Physical Review E, 2011, 84, 011928.	2.1	2
42	Effects of Poly(<scp>l</scp>-lysine) Substrates on Attached <i>Escherichia coli</i> Bacteria. Langmuir, 2010, 26, 2639-2644.	3.5	78
43	Self-organization of the MinE protein ring in subcellular Min oscillations. Physical Review E, 2009, 80, 011922.	2.1	12
44	Pulling Helices inside Bacteria: Imperfect Helices and Rings. Physical Review Letters, 2009, 102, 158105.	7.8	8
45	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
46	Steady-state helices of the actin homolog MreB inside bacteria: Dynamics without motors. Physical Review E, 2007, 76, 031916.	2.1	8
47	Modeling partitioning of Min proteins between daughter cells after septation in<i>Escherichia coli</i>. Physical Biology, 2007, 4, 145-153.	1.8	6
48	Clocking Out: Modeling Phage-Induced Lysis of Escherichia coli. Journal of Bacteriology, 2007, 189, 4749-4755.	2.2	30
49	Clocking Out: Modeling Phage-Induced Lysis of <i>Escherichia coli</i>. Journal of Bacteriology, 2007, 189, 6506-6506.	2.2	0
50	Heterocyst patterns without patterning proteins in cyanobacterial filaments. Developmental Biology, 2007, 312, 427-434.	2.0	18
51	Scaling state of dry two-dimensional froths: Universal angle-deviations and structure. Physical Review E, 2006, 73, 011403.	2.1	7
52	Temperature Dependence of MinD Oscillation in Escherichia coli : Running Hot and Fast. Journal of Bacteriology, 2006, 188, 7661-7667.	2.2	43
53	Maximally fast coarsening algorithms. Physical Review E, 2005, 72, 055701.	2.1	14
54	Fast and accurate coarsening simulation with an unconditionally stable time step. Physical Review E, 2003, 68, 066703.	2.1	104

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55	Pattern Formation inside Bacteria: Fluctuations due to the Low Copy Number of Proteins. Physical Review Letters, 2003, 90, 128102.	7.8	102
56	Diffusion of Asymmetric Swimmers. Physical Review Letters, 2003, 91, 080601.	7.8	1
57	Microbial response to surface microtopography: the role of metabolism in localized mineral dissolution. Chemical Geology, 2001, 180, 19-32.	3.3	131
58	Curved tails in polymerization-based bacterial motility. Physical Review E, 2001, 64, 021904.	2.1	18
59	Dynamic Compartmentalization of Bacteria: Accurate Division inE. Coli. Physical Review Letters, 2001, 87, 278102.	7.8	164
60	Cluster persistence: A discriminating probe of soap froth dynamics. Europhysics Letters, 2000, 51, 223-229.	2.0	11
61	Anisotropic Coarsening: Grain Shapes and Nonuniversal Persistence. Physical Review Letters, 1999, 83, 3772-3775.	7.8	17
62	Triangular anisotropies in driven diffusive systems: Reconciliation of up and down. Physical Review E, 1999, 60, 2710-2715.	2.1	15
63	Dynamical scaling: The two-dimensionalXYmodel following a quench. Physical Review E, 1999, 60, 212-221.	2.1	36
64	Reaction zones and quenched charged-particle systems with long-range interactions. Physical Review E, 1998, 58, 2918-2930.	2.1	1
65	Dynamical multiscaling in quenched Skyrme systems. Europhysics Letters, 1997, 39, 49-54.	2.0	9
66	Persistence, Poisoning, and Autocorrelations in Dilute Coarsening. Physical Review Letters, 1997, 79, 4842-4845.	7.8	27
67	Stress-free spatial anisotropy in phase ordering. Physical Review E, 1996, 54, R2181-R2184.	2.1	13
68	Nonequilibrium phase ordering with a global conservation law. Physical Review E, 1996, 54, 972-973.	2.1	16
69	Comment on â€œTheory of Spinodal Decompositionâ€ Physical Review Letters, 1996, 76, 158-158.	7.8	2
70	Energy-scaling approach to phase-ordering growth laws. Physical Review E, 1995, 51, 5499-5514.	2.1	75
71	Unwinding Scaling Violations in Phase Ordering. Physical Review Letters, 1995, 74, 3836-3839.	7.8	20
72	Scaling violations with textures in two-dimensional phase ordering. Physical Review E, 1995, 51, R2715-R2718.	2.1	15

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73	Phase ordering of two-dimensionalXYsystems below the Kosterlitz-Thouless transition temperature. Physical Review E, 1995, 51, R1641-R1644.	2.1	29
74	Phase-ordering kinetics of one-dimensional nonconserved scalar systems. Physical Review E, 1994, 50, 1900-1911.	2.1	59
75	Growth laws for phase ordering. Physical Review E, 1994, 49, R27-R30.	2.1	110
76	Classical antiferromagnets on the KagomÃ© lattice. Physical Review B, 1992, 45, 7536-7539.	3.2	257