Ludger Santen

List of Publications by Year
in descending order

68 papers	5,175 citations	172443 29 h-index	123420 61 g-index
72 all docs	72 docs citations	72 times ranked	2173 citing authors

#	Article	IF	Citations
1	Modeling Bacterial Adhesion to Unconditioned Abiotic Surfaces. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	9
2	Theoretical modelling of competitive microbial range expansion with heterogeneous mechanical interactions. Physical Biology, 2021, 18, 016008.	1.8	0
3	Stable tug-of-war between kinesin-1 and cytoplasmic dynein upon different ATP and roadblock concentrations. Journal of Cell Science, 2020, 133, .	2.0	14
4	Different binding mechanisms of *Staphylococcus aureus* to hydrophobic and hydrophilic surfaces. Nanoscale, 2020, 12, 19267-19275.	5.6	59
5	Self-Organized Lane Formation in Bidirectional Transport by Molecular Motors. Physical Review Letters, 2020, 124, 198103.	7.8	8
6	Cell-type-specific differences in KDEL receptor clustering in mammalian cells. PLoS ONE, 2020, 15, e0235864.	2.5	8
7	Bidirectional non-Markovian exclusion processes. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 033207.	2.3	4
8	Persistence-Speed Coupling Enhances the Search Efficiency of Migrating Immune Cells. Physical Review Letters, 2020, 125, 268102.	7.8	27
9	Dynamic Assembly of Class II Hydrophobins from T. reesei at the Air–Water Interface. Langmuir, 2019, 35, 9202-9212.	3.5	6
10	Trapping in and Escape from Branched Structures of Neuronal Dendrites. Biophysical Journal, 2018, 115, 2014-2025.	0.5	9
11	Unraveling the structure of treelike networks from first-passage times of lazy random walkers. Physical Review E, 2018, 98, .	2.1	4
12	Activation of mammalian cytoplasmic dynein in multi-motor motility assays. Journal of Cell Science, 2018, 132, .	2.0	9
13	Signal optimization in urban transport: A totally asymmetric simple exclusion process with traffic lights. Physical Review E, 2017, 95, 032108.	2.1	19
14	Localization of a microtubule organizing center by kinesin motors. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 123210.	2.3	0
15	Transport in Physical Space: The Example of Pedestrians, Cars, and Molecular Motors. , 2017, , .		0
16	Run-and-pause dynamics of cytoskeletal motor proteins. Scientific Reports, 2016, 6, 37162.	3.3	31
17	Tracking of plus-ends reveals microtubule functional diversity in different cell types. Scientific Reports, 2016, 6, 30285.	3.3	9
18	Cargo binding promotes KDEL receptor clustering at the mammalian cell surface. Scientific Reports, 2016, 6, 28940.	3.3	23

#	ARTICLE	IF	CITATIONS
19	Environmental Influence on Microtubule-Based Bidirectional Cargo Transport. Biophysical Journal, 2015, 108, 599a.	0.5	0
20	Persistent-random-walk approach to anomalous transport of self-propelled particles. Physical Review E, 2015, 91, 062715.	2.1	30
21	Motility states in bidirectional cargo transport. Europhysics Letters, 2015, 111, 68005.	2.0	13
22	Length regulation of microtubules by molecular motors: exact solution and density profiles. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P06027.	2.3	7
23	Intracellular transport driven by cytoskeletal motors: General mechanisms and defects. Physics Reports, 2015, 593, 1-59.	25.6	85
24	Stochastic binding of Staphylococcus aureus to hydrophobic surfaces. Soft Matter, 2015, 11, 8913-8919.	2.7	35
25	Environmental control of microtubule-based bidirectional cargo transport. Europhysics Letters, 2014, 107, 18004.	2.0	12
26	Fluctuation effects in bidirectional cargo transport. European Physical Journal: Special Topics, 2014, 223, 3215-3225.	2.6	7
27	Anomalous diffusion of self-propelled particles in directed random environments. Physical Review E, 2014, 90, 030701.	2.1	33
28	Bidirectional Microtubule-Based Transport in Axons. Biophysical Journal, 2014, 106, 363a.	0.5	0
29	A bottleneck model for bidirectional transport controlled by fluctuations. Europhysics Letters, 2012, 98, 40009.	2.0	11
30	Theoretical Modeling of Aging Effects in Microtubule Dynamics. Biophysical Journal, 2011, 100, 832-838.	0.5	10
31	Particle interactions and lattice dynamics: scenarios for efficient bidirectional stochastic transport?. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P07004.	2.3	8
32	Asymmetric simple exclusion process in one-dimensional chains with long-range links. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P04003.	2.3	2
33	Boundary-induced orientation of dynamic filament networks and vesicle agglomerations. Physical Review E, 2011, 84, 060902.	2.1	3
34	Active transport and cluster formation on 2D networks. European Physical Journal E, 2010, 32, 191-208.	1.6	11
35	Structural evolution of protein-biofilms: Simulations and experiments. Biomicrofluidics, 2010, 4, 032201.	2.4	21
36	Traffic of cytoskeletal motors with disordered attachment rates. Physical Review E, 2010, 81, 031929.	2.1	19

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37	Shock dynamics of two-lane driven lattice gases. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06002.	2.3	24
38	Bidirectional transport on a dynamic lattice. Physical Review E, 2010, 82, 040901.	2.1	19
39	Bidirectional Traffic on Microtubules. Lecture Notes in Computer Science, 2010, , 542-551.	1.3	0
40	A model for bidirectional traffic of cytoskeletal motors. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P03030.	2.3	21
41	Protein adsorption on tailored substrates: long-range forces and conformational changes. Journal of Physics Condensed Matter, 2008, 20, 404226.	1.8	40
42	Protein adsorption kinetics in different surface potentials. Europhysics Letters, 2008, 81, 56003.	2.0	36
43	Accidents in Platoons of Vehicles. , 2007, , 623-631.		9
44	Partially asymmetric exclusion processes with sitewise disorder. Physical Review E, 2006, 74, 061101.	2.1	33
45	Optimization of highway networks and traffic forecasting. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 165-173.	2.6	33
46	Partially Asymmetric Exclusion Models with Quenched Disorder. Physical Review Letters, 2005, 94, 010601.	7.8	55
47	Partially asymmetric zero-range process with quenched disorder. Physical Review E, 2005, 72, 046129.	2.1	30
48	Dynamics of an exclusion process with creation and annihilation. Journal of Physics A, 2004, 37, 3933-3944.	1.6	42
49	Empirical test for cellular automaton models of traffic flow. Physical Review E, 2004, 70, 016115.	2.1	101
50	A realistic two-lane traffic model for highway traffic. Journal of Physics A, 2002, 35, 3369-3388.	1.6	123
51	Single-vehicle data of highway traffic: Microscopic description of traffic phases. Physical Review E, 2002, 65, 056133.	2.1	145
52	The Asymmetric Exclusion Process Revisited: Fluctuations and Dynamics in the Domain Wall Picture. Journal of Statistical Physics, 2002, 106, 187-199.	1.2	68
53	Relaxation Times in the ASEP Model Using a DMRG Method. Journal of Statistical Physics, 2002, 109, 623-639.	1.2	48
54	Boundary Induced Phase Transitions in Driven Lattice Gases with Metastable States. Physical Review Letters, 2001, 86, 2498-2501.	7.8	48

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55	Empirical evidence for a boundary-induced nonequilibrium phase transition. Journal of Physics A, 2001, 34, L45-L52.	1.6	92
56	Human behavior as origin of traffic phases. Physical Review E, 2001, 65, 015101.	2.1	47
57	Statistical physics of vehicular traffic and some related systems. Physics Reports, 2000, 329, 199-329.	25.6	2,140
58	Absence of thermodynamic phase transition in a model glass former. Nature, 2000, 405, 550-551.	27.8	153
59	Comment on â€œCritical behavior of a traffic flow modelâ€• Physical Review E, 2000, 61, 3270-3271.	2.1	34
60	Towards a realistic microscopic description of highway traffic. Journal of Physics A, 2000, 33, L477-L485.	1.6	329
61	Simulation of vehicular traffic: a statistical physics perspective. Computing in Science and Engineering, 2000, 2, 80-87.	1.2	24
62	Disorder effects in cellular automata for two-lane traffic. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 614-633.	2.6	141
63	Spatio-temporal organization of vehicles in a cellular automata model of traffic with `slow-to-start' rule. Journal of Physics A, 1999, 32, 3229-3252.	1.6	16
64	Single-vehicle data of highway traffic: A statistical analysis. Physical Review E, 1999, 60, 6480-6490.	2.1	229
65	The Asymmetric Exclusion Process: Comparison of Update Procedures. Journal of Statistical Physics, 1998, 92, 151-194.	1.2	220
66	Jamming transition in a cellular automaton model for traffic flow. Physical Review E, 1998, 57, 1309-1314.	2.1	79
67	The critical exponents of the two-dimensional Ising spin glass revisited: exact ground-state calculations and Monte Carlo simulations. Journal of Physics A, 1996, 29, 3939-3950.	1.6	99
68	Off-equilibrium dynamics in finite-dimensional spin-glass models. Physical Review B, 1996, 53, 6418-6428.	3.2	147