

Ludger Santen

List of Publications by Year in descending order

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68
papers

5,175
citations

172207

29
h-index

123241

61
g-index

72
all docs

72
docs citations

72
times ranked

2173
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical physics of vehicular traffic and some related systems. Physics Reports, 2000, 329, 199-329.	10.3	2,140
2	Towards a realistic microscopic description of highway traffic. Journal of Physics A, 2000, 33, L477-L485.	1.6	329
3	Single-vehicle data of highway traffic: A statistical analysis. Physical Review E, 1999, 60, 6480-6490.	0.8	229
4	The Asymmetric Exclusion Process: Comparison of Update Procedures. Journal of Statistical Physics, 1998, 92, 151-194.	0.5	220
5	Absence of thermodynamic phase transition in a model glass former. Nature, 2000, 405, 550-551.	13.7	153
6	Off-equilibrium dynamics in finite-dimensional spin-glass models. Physical Review B, 1996, 53, 6418-6428.	1.1	147
7	Single-vehicle data of highway traffic: Microscopic description of traffic phases. Physical Review E, 2002, 65, 056133.	0.8	145
8	Disorder effects in cellular automata for two-lane traffic. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 614-633.	1.2	141
9	A realistic two-lane traffic model for highway traffic. Journal of Physics A, 2002, 35, 3369-3388.	1.6	123
10	Empirical test for cellular automaton models of traffic flow. Physical Review E, 2004, 70, 016115.	0.8	101
11	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
12	Empirical evidence for a boundary-induced nonequilibrium phase transition. Journal of Physics A, 2001, 34, L45-L52.	1.6	92
13	Intracellular transport driven by cytoskeletal motors: General mechanisms and defects. Physics Reports, 2015, 593, 1-59.	10.3	85
14	Jamming transition in a cellular automaton model for traffic flow. Physical Review E, 1998, 57, 1309-1314.	0.8	79
15	The Asymmetric Exclusion Process Revisited: Fluctuations and Dynamics in the Domain Wall Picture. Journal of Statistical Physics, 2002, 106, 187-199.	0.5	68
16	Different binding mechanisms of <i>Staphylococcus aureus</i> to hydrophobic and hydrophilic surfaces. Nanoscale, 2020, 12, 19267-19275.	2.8	59
17	Partially Asymmetric Exclusion Models with Quenched Disorder. Physical Review Letters, 2005, 94, 010601.	2.9	55
18	Boundary Induced Phase Transitions in Driven Lattice Gases with Metastable States. Physical Review Letters, 2001, 86, 2498-2501.	2.9	48

#	ARTICLE	IF	CITATIONS
19	Relaxation Times in the ASEP Model Using a DMRG Method. Journal of Statistical Physics, 2002, 109, 623-639.	0.5	48
20	Human behavior as origin of traffic phases. Physical Review E, 2001, 65, 015101.	0.8	47
21	Dynamics of an exclusion process with creation and annihilation. Journal of Physics A, 2004, 37, 3933-3944.	1.6	42
22	Protein adsorption on tailored substrates: long-range forces and conformational changes. Journal of Physics Condensed Matter, 2008, 20, 404226.	0.7	40
23	Protein adsorption kinetics in different surface potentials. Europhysics Letters, 2008, 81, 56003.	0.7	36
24	Stochastic binding of Staphylococcus aureus to hydrophobic surfaces. Soft Matter, 2015, 11, 8913-8919.	1.2	35
25	Comment on "Critical behavior of a traffic flow model". Physical Review E, 2000, 61, 3270-3271.	0.8	34
26	Optimization of highway networks and traffic forecasting. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 165-173.	1.2	33
27	Partially asymmetric exclusion processes with sitewise disorder. Physical Review E, 2006, 74, 061101.	0.8	33
28	Anomalous diffusion of self-propelled particles in directed random environments. Physical Review E, 2014, 90, 030701.	0.8	33
29	Run-and-pause dynamics of cytoskeletal motor proteins. Scientific Reports, 2016, 6, 37162.	1.6	31
30	Partially asymmetric zero-range process with quenched disorder. Physical Review E, 2005, 72, 046129.	0.8	30
31	Persistent-random-walk approach to anomalous transport of self-propelled particles. Physical Review E, 2015, 91, 062715.	0.8	30
32	Persistence-Speed Coupling Enhances the Search Efficiency of Migrating Immune Cells. Physical Review Letters, 2020, 125, 268102.	2.9	27
33	Simulation of vehicular traffic: a statistical physics perspective. Computing in Science and Engineering, 2000, 2, 80-87.	1.2	24
34	Shock dynamics of two-lane driven lattice gases. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P06002.	0.9	24
35	Cargo binding promotes KDEL receptor clustering at the mammalian cell surface. Scientific Reports, 2016, 6, 28940.	1.6	23
36	A model for bidirectional traffic of cytoskeletal motors. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P03030.	0.9	21

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37	Structural evolution of protein-biofilms: Simulations and experiments. <i>Biomicrofluidics</i> , 2010, 4, 032201.	1.2	21
38	Traffic of cytoskeletal motors with disordered attachment rates. <i>Physical Review E</i> , 2010, 81, 031929.	0.8	19
39	Bidirectional transport on a dynamic lattice. <i>Physical Review E</i> , 2010, 82, 040901.	0.8	19
40	Signal optimization in urban transport: A totally asymmetric simple exclusion process with traffic lights. <i>Physical Review E</i> , 2017, 95, 032108.	0.8	19
41	Spatio-temporal organization of vehicles in a cellular automata model of traffic with 'slow-to-start' rule. <i>Journal of Physics A</i> , 1999, 32, 3229-3252.	1.6	16
42	Stable tug-of-war between kinesin-1 and cytoplasmic dynein upon different ATP and roadblock concentrations. <i>Journal of Cell Science</i> , 2020, 133, .	1.2	14
43	Motility states in bidirectional cargo transport. <i>Europhysics Letters</i> , 2015, 111, 68005.	0.7	13
44	Environmental control of microtubule-based bidirectional cargo transport. <i>Europhysics Letters</i> , 2014, 107, 18004.	0.7	12
45	Active transport and cluster formation on 2D networks. <i>European Physical Journal E</i> , 2010, 32, 191-208.	0.7	11
46	A bottleneck model for bidirectional transport controlled by fluctuations. <i>Europhysics Letters</i> , 2012, 98, 40009.	0.7	11
47	Theoretical Modeling of Aging Effects in Microtubule Dynamics. <i>Biophysical Journal</i> , 2011, 100, 832-838.	0.2	10
48	Tracking of plus-ends reveals microtubule functional diversity in different cell types. <i>Scientific Reports</i> , 2016, 6, 30285.	1.6	9
49	Trapping in and Escape from Branched Structures of Neuronal Dendrites. <i>Biophysical Journal</i> , 2018, 115, 2014-2025.	0.2	9
50	Activation of mammalian cytoplasmic dynein in multi-motor motility assays. <i>Journal of Cell Science</i> , 2018, 132, .	1.2	9
51	Modeling Bacterial Adhesion to Unconditioned Abiotic Surfaces. <i>Frontiers in Mechanical Engineering</i> , 2021, 7, .	0.8	9
52	Accidents in Platoons of Vehicles. , 2007, , 623-631.		9
53	Particle interactions and lattice dynamics: scenarios for efficient bidirectional stochastic transport?. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P07004.	0.9	8
54	Self-Organized Lane Formation in Bidirectional Transport by Molecular Motors. <i>Physical Review Letters</i> , 2020, 124, 198103.	2.9	8

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55	Cell-type-specific differences in KDEL receptor clustering in mammalian cells. PLoS ONE, 2020, 15, e0235864.	1.1	8
56	Fluctuation effects in bidirectional cargo transport. European Physical Journal: Special Topics, 2014, 223, 3215-3225.	1.2	7
57	Length regulation of microtubules by molecular motors: exact solution and density profiles. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P06027.	0.9	7
58	Dynamic Assembly of Class II Hydrophobins from <i>T. reesei</i> at the Air-Water Interface. Langmuir, 2019, 35, 9202-9212.	1.6	6
59	Unraveling the structure of treelike networks from first-passage times of lazy random walkers. Physical Review E, 2018, 98, .	0.8	4
60	Bidirectional non-Markovian exclusion processes. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 033207.	0.9	4
61	Boundary-induced orientation of dynamic filament networks and vesicle agglomerations. Physical Review E, 2011, 84, 060902.	0.8	3
62	Asymmetric simple exclusion process in one-dimensional chains with long-range links. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P04003.	0.9	2
63	Bidirectional Microtubule-Based Transport in Axons. Biophysical Journal, 2014, 106, 363a.	0.2	0
64	Environmental Influence on Microtubule-Based Bidirectional Cargo Transport. Biophysical Journal, 2015, 108, 599a.	0.2	0
65	Localization of a microtubule organizing center by kinesin motors. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 123210.	0.9	0
66	Transport in Physical Space: The Example of Pedestrians, Cars, and Molecular Motors. , 2017, , .		0
67	Theoretical modelling of competitive microbial range expansion with heterogeneous mechanical interactions. Physical Biology, 2021, 18, 016008.	0.8	0
68	Bidirectional Traffic on Microtubules. Lecture Notes in Computer Science, 2010, , 542-551.	1.0	0