Andreas Schadschneider

List of Publications by Year
in descending order

167 papers	10,154 citations	53751 45 h-index	37183 96 g-index
176 all docs	176 docs citations	176 times ranked	3094 citing authors

#	Article	IF	Citations
1	Heterogeneity-induced lane and band formation in self-driven particle systems. Scientific Reports, 2022, 12, 4768.	1.6	5
2	An attempt to distinguish physical and socio-psychological influences on pedestrian bottleneck. Royal Society Open Science, 2022, 9, .	1.1	6
3	Effect of turning curvature on the single-file dynamics of pedestrian flow: An experimental study. Physica A: Statistical Mechanics and Its Applications, 2021, 563, 125405.	1.2	18
4	Flux-density relation for traffic of army ants in a 3-lane bi-directional trail. Physica A: Statistical Mechanics and Its Applications, 2021, 567, 125664.	1.2	2
5	Exploring the behavior of self-organized queuing for pedestrian flow through a non-service bottleneck. Physica A: Statistical Mechanics and Its Applications, 2021, 562, 125186.	1.2	10
6	The effect of modern traffic information on Braess' paradox. Physica A: Statistical Mechanics and Its Applications, 2021, 571, 125829.	1.2	7
7	PEDESTRIAN DYNAMICS IN SINGLE-FILE MOVEMENT UNDER BACKGROUND MUSIC WITH DIFFERENT TEMPOS. International Journal of Modeling, Simulation, and Scientific Computing, 2021, 24, .	0.9	3
8	Prediction of pedestrian dynamics in complex architectures with artificial neural networks. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2020, 24, 556-568.	2.6	15
9	Dietrich Stauffer (1943–2019). International Journal of Modern Physics C, 2020, 31, 2001001.	0.8	1
10	Stop-and-go waves induced by correlated noise in pedestrian models without inertia. Journal of Traffic and Transportation Engineering (English Edition), 2020, 7, 52-60.	2.0	2
11	The Trouble with 2nd Order Models or How to Generate Stop-and-Go Traffic in a 1st Order Model. Springer Proceedings in Physics, 2020, , 45-51.	0.1	2
12	Modeling the effect of visibility on upstairs crowd evacuation by a stochastic FFCA model with finer discretization. Physica A: Statistical Mechanics and Its Applications, 2019, 531, 121723.	1.2	21
13	Modeling fatigue of ascending stair evacuation with modified fine discrete floor field cellular automata. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1897-1906.	0.9	26
14	Modelling of Pedestrian and Evacuation Dynamics. , 2019, , 649-669.		3
15	Empirical Results of Pedestrian and Evacuation Dynamics. , 2019, , 671-699.		2
16	Kardar-Parisi-Zhang universality of the Nagel-Schreckenberg model. Physical Review E, 2019, 100, 052111.	0.8	9
17	Resolution of deadlocks in a fine discrete floor field cellular automata model—modeling of turning and lateral movement at bottlenecks. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 123402.	0.9	6
18	Experimental study on the effect of background music on pedestrian movement at high density. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1011-1018.	0.9	35

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19	Technical realisation of a remote-controlled forced mechanic oscillation experiment through the Internet. Physics Education, 2019, 54, 015012.	0.3	2
20	Prediction of Pedestrian Speed with Artificial Neural Networks. , 2019, , 327-335.		5
21	Dynamical Universality Class of the Nagelâ€"Schreckenberg and Related Models. , 2019, , 53-60.		0
22	Noise-Induced Stop-and-Go Dynamics. , 2019, , 337-345.		1
23	Special Issue on Vehicular and Pedestrian Traffic Flow from Data to Models. Transportmetrica A: Transport Science, 2018, 14, 373-374.	1.3	1
24	Estimating Escalator vs Stairs Choice Behavior in the Presence of Entry Railing: A Field Study. KSCE Journal of Civil Engineering, 2018, 22, 5203-5214.	0.9	5
25	Pedestrian Dynamics: From Empirical Results to Modeling. Modeling and Simulation in Science, Engineering and Technology, 2018, , 63-102.	0.4	23
26	Zum Gebrauch der Begriffe Experiment, Theorie, Modell und Gesetz in den mathematisch-naturwissenschaftlichen Fächern. Chemkon - Chemie Konkret, Forum Fuer Unterricht Und Didaktik, 2018, 25, 324-333.	0.2	2
27	Modeling the effects of entry restriction on crowd dynamics for dual-exit bottleneck. International Journal of Modern Physics C, 2018, 29, 1850101.	0.8	6
28	Braess paradox in a network with stochastic dynamics and fixed strategies. Physica A: Statistical Mechanics and Its Applications, 2018, 507, 133-152.	1.2	13
29	Diffusion with resetting inside a circle. Physical Review E, 2018, 97, 062106.	0.8	39
30	Modelling of Pedestrian and Evacuation Dynamics. , 2018, , 1-22.		13
31	Empirical Results of Pedestrian and Evacuation Dynamics. , 2018, , 1-29.		12
32	Empirical study on social groups in pedestrian evacuation dynamics. Physica A: Statistical Mechanics and Its Applications, 2017, 475, 129-141.	1.2	113
33	Influence of the number of predecessors in interaction within acceleration-based flow models. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 345102.	0.7	3
34	Braess paradox in a network of totally asymmetric exclusion processes. Physical Review E, 2016, 94, 062312.	0.8	17
35	White and relaxed noises in optimal velocity models for pedestrian flow with stop-and-go waves. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 185101.	0.7	28
36	A Stochastic Optimal Velocity Model for Pedestrian Flow. Lecture Notes in Computer Science, 2016, , 528-538.	1.0	4

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37	Congestion Dynamics in Pedestrian Single-File Motion. , 2016, , 89-96.		17
38	Evacuation Dynamics of Asymmetrically Coupled Pedestrian Pairs. , 2016, , 265-272.		3
39	When Is a Bottleneck a Bottleneck?. , 2016, , 403-410.		1
40	Empirical Study of the Influence of Social Groups in Evacuation Scenarios. , 2016, , 65-72.		12
41	Jamming transitions in force-based models for pedestrian dynamics. Physical Review E, 2015, 92, 042809.	0.8	26
42	Diffusion with resetting in bounded domains. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 285003.	0.7	96
43	Defect-induced phase transition in the asymmetric simple exclusion process. Europhysics Letters, 2015, 110, 20008.	0.7	25
44	Exclusive queueing processes and their application to traffic systems. Mathematical Models and Methods in Applied Sciences, 2015, 25, 401-422.	1.7	19
45	Effective ergodicity breaking in an exclusion process with varying system length. Physica A: Statistical Mechanics and Its Applications, 2015, 433, 100-106.	1.2	2
46	Fibonacci family of dynamical universality classes. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12645-12650.	3.3	83
47	Study of Influence of Groups on Evacuation Dynamics Using a Cellular Automaton Model. Transportation Research Procedia, 2014, 2, 168-176.	0.8	54
48	OpenPedSim: A Framework for Pedestrian Flow Analysis. , 2014, , 1323-1330.		0
49	The Dynamics of Waiting: The Exclusive Queueing Process. Transportation Research Procedia, 2014, 2, 87-95.	0.8	7
50	Universal flow-density relation of single-file bicycle, pedestrian and car motion. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 3274-3277.	0.9	63
51	Critical Bottleneck Size for Jamless Particle Flows in Two Dimensions. Physical Review Letters, 2014, 112, 138701.	2.9	43
52	Simulation of Merging Pedestrian Streams at T-junctions. Transportation Research Procedia, 2014, 2, 406-411.	0.8	8
53	Stochastic Headway Dependent Velocity Model for 1d Pedestrian Dynamics at High Densities. Transportation Research Procedia, 2014, 2, 400-405.	0.8	12
54	Cellular Automaton Approach to Arching in Two-Dimensional Granular Media. Lecture Notes in Computer Science, 2014, , 310-319.	1.0	4

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55	Quantitative Validation of the Generalized Centrifugal Force Model. , 2014, , 603-613.		0
56	Comparative Analysis of Pedestrian, Bicycle and Car Traffic Moving in Circuits. Procedia, Social and Behavioral Sciences, 2013, 104, 1130-1138.	0.5	17
57	Critical behavior of the exclusive queueing process. Europhysics Letters, 2013, 104, 30004.	0.7	5
58	On Force-Based Modeling of Pedestrian Dynamics. The Kluwer International Series in Video Computing, 2013, , 23-41.	0.7	6
59	A Cellular Automaton Approach for Lane Formation in Pedestrian Counterflow. , 2013, , 149-160.		4
60	Modeling the Desired Direction in a Force-Based Model for Pedestrian Dynamics. , 2013, , 263-275.		13
61	HERMES: An Evacuation Assistant for Large Sports Arenas Based on Microscopic Simulations of Pedestrian Dynamics. , 2013, , 287-298.		5
62	Ordering in bidirectional pedestrian flows and its influence on the fundamental diagram. Journal of Statistical Mechanics: Theory and Experiment, 2012, 2012, P02002.	0.9	226
63	Quantitative analysis of pedestrian counterflow in a cellular automaton model. Physical Review E, 2012, 85, 066128.	0.8	106
64	Density profiles of the exclusive queuing process. Journal of Statistical Mechanics: Theory and Experiment, 2012, 2012, P12004.	0.9	8
65	Efficient and validated simulation of crowds for an evacuation assistant. Computer Animation and Virtual Worlds, 2012, 23, 3-15.	0.7	23
66	Transport on Networks. , 2011, , 383-405.		3
67	Dynamical analysis of the exclusive queueing process. Physical Review E, 2011, 83, 051128.	0.8	17
68	Exact dynamical state of the exclusive queueing process with deterministic hopping. Physical Review E, 2011, 84, 051127.	0.8	9
69	Vehicular Traffic III: Other CA Models. , 2011, , 281-333.		0
70	Vehicular Traffic IV: Non-CA Approaches. , 2011, , 335-381.		0
71	Transitions in pedestrian fundamental diagrams of straight corridors and T-junctions. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P06004.	0.9	250
72	Pedestrian Dynamics. , 2011, , 407-460.		5

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73	Evacuation Dynamics: Empirical Results, Modeling and Applications. , 2011, , 517-550.		40
74	Force-based models of pedestrian dynamics. Networks and Heterogeneous Media, 2011, 6, 425-442.	0.5	92
75	Empirical results for pedestrian dynamics and their implications for modeling. Networks and Heterogeneous Media, 2011, 6, 545-560.	0.5	83
76	Traffic Phenomena in Biology. , 2011, , 461-488.		0
77	Generalized centrifugal-force model for pedestrian dynamics. Physical Review E, 2010, 82, 046111.	0.8	276
78	Enhanced Empirical Data for the Fundamental Diagram and the Flow Through Bottlenecks. , 2010, , 145-156.		76
79	Automatic Extraction of Pedestrian Trajectories from Video Recordings. , 2010, , 43-54.		97
80	CA Modeling of Ant-Traffic on Trails. Understanding Complex Systems, 2010, , 275-300.	0.3	7
81	Empirical Results for Pedestrian Dynamics at Bottlenecks. Lecture Notes in Computer Science, 2010, , 575-584.	1.0	10
82	Phase Coexistence in Congested States of Pedestrian Dynamics. Lecture Notes in Computer Science, 2010, , 496-505.	1.0	41
83	Productivity Enhancement through Lot Size Optimization. Lecture Notes in Computer Science, 2010, , 593-599.	1.0	0
84	Quantitative Description of Pedestrian Dynamics with a Force-Based Model. , 2009, , .		13
85	Disordered driven lattice gases with boundary reservoirs and Langmuir kinetics. Physical Review E, 2009, 79, 031107.	0.8	19
86	Trafficlike Collective Movement of Ants on Trails: Absence of a Jammed Phase. Physical Review Letters, 2009, 102, 108001.	2.9	99
87	VALIDATION OF CA MODELS OF PEDESTRIAN DYNAMICS WITH FUNDAMENTAL DIAGRAMS. Cybernetics and Systems, 2009, 40, 367-389.	1.6	73
88	Empirical Results for Pedestrian Dynamics and their Implications for Cellular Automata Models. , 2009, , 27-43.		38
89	Evacuation Dynamics: Empirical Results, Modeling and Applications. , 2009, , 3142-3176.		241
90	Cellular Automaton Approach to Highway Traffic: What do we Know?. , 2009, , 19-34.		9

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91	Fundamentals of Pedestrian and Evacuation Dynamics. Advances in Mechatronics and Mechanical Engineering, 2009, , 124-154.	1.0	27
92	A Public Conveyance Model and Analysis on Clustering of Vehicles. , 2009, , 407-412.		0
93	Statistical Properties of Disordered Driven Lattice Gases with Open Boundaries. , 2009, , 307-313.		0
94	Traffic Flow on Ant Trails: Empirical Results vs. Theoretical Predictions. , 2009, , 701-706.		0
95	MECHANICAL RESTRICTION VS. HUMAN OVERREACTION. , 2009, , 93-104.		0
96	Phase diagram and edge effects in the ASEP with bottlenecks. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 1972-1986.	1.2	45
97	Characteristics of ant-inspired traffic flow. Swarm Intelligence, 2008, 2, 25-41.	1.3	81
98	Intra-cellular traffic: bio-molecular motors on filamentary tracks. European Physical Journal B, 2008, 64, 593-600.	0.6	13
99	QUANTUM CORNER â€" TRANSFER MATRIX DMRG. International Journal of Modern Physics C, 2008, 19, 1145-1161.	0.8	4
100	Single-bottleneck approximation for driven lattice gases with disorder and open boundary conditions. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P04009.	0.9	33
101	Modelling of Transport and Traffic Problems. Lecture Notes in Computer Science, 2008, , 22-31.	1.0	12
102	Conflicts and Friction in Pedestrian Dynamics. Lecture Notes in Computer Science, 2008, , 559-562.	1.0	4
103	Fundamental Diagram and Validation of Crowd Models. Lecture Notes in Computer Science, 2008, , 563-566.	1.0	7
104	Intracellular transport by single-headed kinesin KIF1A: Effects of single-motor mechanochemistry and steric interactions. Physical Review E, 2007, 75, 041905.	0.8	62
105	An information-based traffic control in a public conveyance system: Reduced clustering and enhanced efficiency. Physica A: Statistical Mechanics and Its Applications, 2007, 384, 600-612.	1.2	29
106	Traffic Phenomena in Biology: From Molecular Motors to Organisms. , 2007, , 223-238.		1
107	Traffic on Bidirectional Ant Trails: Coarsening Behaviour and Fundamental Diagrams. , 2007, , 269-276.		1
108	Asymmetric Exclusion Processes with Non-Factorizing Steady States. , 2007, , 473-479.		2

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109	Mechanical Restriction Versus Human Overreaction: Accident Avoidance and Two-Lane Traffic Simulations. , 2007, , 503-508.		19
110	Asymmetric exclusion processes with shuffled dynamics. Journal of Physics A, 2006, 39, 33-44.	1.6	47
111	Cellular automata models of highway traffic. Physica A: Statistical Mechanics and Its Applications, 2006, 372, 142-150.	1.2	40
112	Modelling of self-driven particles: Foraging ants and pedestrians. Physica A: Statistical Mechanics and Its Applications, 2006, 372, 132-141.	1.2	99
113	From aggressive driving to molecular motor traffic. Journal of Physics A, 2006, 39, 14263-14287.	1.6	15
114	Competition of coarsening and shredding of clusters in a driven diffusive lattice gas. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P06012-P06012.	0.9	9
115	STATISTICAL PROPERTIES OF ONLINE AUCTIONS. International Journal of Modern Physics C, 2006, 17, 1485-1493.	0.8	16
116	Traffic Patterns and Flow Characteristics in an Ant Trail Model. Lecture Notes in Computer Science, 2006, , 306-315.	1.0	0
117	Optimization of highway networks and traffic forecasting. Physica A: Statistical Mechanics and Its Applications, 2005, 346, 165-173.	1.2	33
118	Physics of transport and traffic phenomena in biology: from molecular motors and cells to organisms. Physics of Life Reviews, 2005, 2, 318-352.	1.5	287
119	Exact ground states of quantum spin-2 models on the hexagonal lattice. Physical Review B, 2005, 71, .	1.1	16
120	Intracellular Transport of Single-Headed Molecular Motors KIF1A. Physical Review Letters, 2005, 95, 118101.	2.9	178
121	Discretization effects and the influence of walking speed in cellular automata models for pedestrian dynamics. Journal of Statistical Mechanics: Theory and Experiment, 2004, 2004, P10011.	0.9	173
122	Collective Traffic-like Movement of Ants on a Trail: Dynamical Phases and Phase Transitions. Journal of the Physical Society of Japan, 2004, 73, 2979-2985.	0.7	43
123	Empirical test for cellular automaton models of traffic flow. Physical Review E, 2004, 70, 016115.	0.8	101
124	Collective effects in traffic on bi-directional ant trails. Journal of Theoretical Biology, 2004, 231, 279-285.	0.8	77
125	Self-organized patterns and traffic flow in Colonies of organisms: from bacteria and social insects to vertebrates. Phase Transitions, 2004, 77, 601-624.	0.6	45
126	A stochastic cellular automaton model for traffic flow with multiple metastable states. Journal of Physics A, 2004, 37, 3101-3110.	1.6	56

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127	Traffic of Ants on a Trail: A Stochastic Modelling and Zero Range Process. Lecture Notes in Computer Science, 2004, , 192-201.	1.0	2
128	Simulation of competitive egress behavior: comparison with aircraft evacuation data. Physica A: Statistical Mechanics and Its Applications, 2003, 324, 689-697.	1.2	212
129	Friction effects and clogging in a cellular automaton model for pedestrian dynamics. Physical Review E, 2003, 67, 056122.	0.8	403
130	Thermodynamic properties and thermal correlation lengths of a Hubbard model with bond-charge interaction. Physical Review B, 2003, 68, .	1.1	5
131	Cluster formation and anomalous fundamental diagram in an ant-trail model. Physical Review E, 2003, 67, 036120.	0.8	110
132	From ant trails to pedestrian dynamics. Applied Bionics and Biomechanics, 2003, 1, 11-19.	0.5	9
133	From Ant Trails to Pedestrian Dynamics. Applied Bionics and Biomechanics, 2003, 1, 11-19.	0.5	17
134	Cellular Automata Simulation of Collective Phenomena in Pedestrian Dynamics. Lecture Notes in Computational Science and Engineering, 2003, , 390-405.	0.1	1
135	Broken Ergodicity in a Stochastic Model with Condensation. Physical Review Letters, 2002, 89, 090601.	2.9	16
136	Comment on `Garden of Eden states in a traffic model revisited'. Journal of Physics A, 2002, 35, 1321-1322.	1.6	10
137	A cellular-automata model of flow in ant trails: non-monotonic variation of speed with density. Journal of Physics A, 2002, 35, L573-L577.	1.6	93
138	CA Approach to Collective Phenomena in Pedestrian Dynamics. Lecture Notes in Computer Science, 2002, , 239-248.	1.0	54
139	Exact ground states of spin-2 chains. Europhysics Letters, 2002, 59, 889-895.	0.7	16
140	Single-vehicle data of highway traffic: Microscopic description of traffic phases. Physical Review E, 2002, 65, 056133.	0.8	145
141	Simulation of evacuation processes using a bionics-inspired cellular automaton model for pedestrian dynamics. Physica A: Statistical Mechanics and Its Applications, 2002, 312, 260-276.	1.2	831
142	Traffic flow: a statistical physics point of view. Physica A: Statistical Mechanics and Its Applications, 2002, 313, 153-187.	1.2	153
143	Localized defects in a cellular automaton model for traffic flow with phase separation. Physica A: Statistical Mechanics and Its Applications, 2002, 308, 471-482.	1.2	33
144	Open boundaries in a cellular automaton model for traffic flow with metastable states. Physical Review E, 2002, 66, 046113.	0.8	95

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145	Exact Mean-Field Solutions of the Asymmetric Random Average Process. Journal of Statistical Physics, 2002, 106, 173-185.	0.5	24
146	Exact Stationary State of a Staggered Stochastic Hopping Model. Journal of Low Temperature Physics, 2002, 126, 1411-1422.	0.6	7
147	Optimizing traffic lights in a cellular automaton model for city traffic. Physical Review E, 2001, 64, 056132.	0.8	333
148	Human behavior as origin of traffic phases. Physical Review E, 2001, 65, 015101.	0.8	47
149	A microscopic model for packet transport in the Internet. Physica A: Statistical Mechanics and Its Applications, 2001, 294, 249-256.	1.2	35
150	Random walk theory of jamming in a cellular automaton model for traffic flow. Physica A: Statistical Mechanics and Its Applications, 2001, 294, 525-538.	1.2	28
151	Simulation of pedestrian dynamics using a two-dimensional cellular automaton. Physica A: Statistical Mechanics and Its Applications, 2001, 295, 507-525.	1.2	1,458
152	Statistical physics of traffic flow. Physica A: Statistical Mechanics and Its Applications, 2000, 285, 101-120.	1.2	98
153	On the ubiquity of matrix-product states in one-dimensional stochastic processes with boundary interactions. Physica A: Statistical Mechanics and Its Applications, 1999, 271, 102-117.	1.2	38
154	Disorder effects in cellular automata for two-lane traffic. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 614-633.	1.2	141
155	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
156	Self-organization of traffic jams in cities: Effects of stochastic dynamics and signal periods. Physical Review E, 1999, 59, R1311-R1314.	0.8	174
157	Garden of Eden states in traffic models. Journal of Physics A, 1998, 31, L225-L231.	1.6	45
158	Car-oriented mean-field theory for traffic flow models. Journal of Physics A, 1997, 30, L69-L75.	1.6	60
159	Traffic flow models with â€˜slow-to-startâ€™ rules. Annalen Der Physik, 1997, 509, 541-551.	0.9	97
160	Î·-pairing superconductivity in generalized Hubbard models. Phase Transitions, 1996, 57, 37-41.	0.6	0
161	Superconductivity in an exactly solvable Hubbard model with bond-charge interaction. Physical Review B, 1995, 51, 10386-10391.	1.1	72
162	Î·-Pairing as a Mechanism of Superconductivity in Models of Strongly Correlated Electrons. Physical Review Letters, 1995, 74, 789-792.	2.9	116

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163	Exact Ground States of Generalized Hubbard Models. Physical Review Letters, 1995, 75, 4298-4301.	2.9	67
164	Pair Correlation Functions in One-Dimensional Correlated-Hopping Models. Europhysics Letters, 1995, 32, 179-184.	0.7	10
165	Discrete stochastic models for traffic flow. Physical Review E, 1995, 51, 2939-2949.	0.8	412
166	Exact solution of a one-dimensional fermion model with interchain tunneling. Physical Review B, 1994, 50, 9676-9679.	1.1	15
167	Matrix Product Ground States for One-Dimensional Spin-1 Quantum Antiferromagnets. Europhysics Letters, 1993, 24, 293-297.	0.7	223