Gerta KÃ¶ster

List of Publications by Year
in descending order

49 papers	987 citations	516710 16 h-index	477307 29 g-index
53 all docs	53 docs citations	53 times ranked	492 citing authors

#	Article	IF	Citations
1	Natural discretization of pedestrian movement in continuous space. Physical Review E, 2012, 86, 046108.	2.1	133
2	On modelling the influence of group formations in a crowd. Contemporary Social Science, 2011, 6, 397-414.	1.9	80
3	Dynamic stride length adaptation according to utility and personal space. Transportation Research Part B: Methodological, 2015, 74, 104-117.	5.9	75
4	Gradient navigation model for pedestrian dynamics. Physical Review E, 2014, 89, 062801.	2.1	64
5	Avoiding numerical pitfalls in social force models. Physical Review E, 2013, 87, 063305.	2.1	61
6	Modelling social identification and helping in evacuation simulation. Safety Science, 2016, 89, 288-300.	4.9	61
7	Bidirectional coupling of macroscopic and microscopic pedestrian evacuation models. Safety Science, 2012, 50, 1695-1703.	4.9	40
8	Towards automatic and robust adjustment of human behavioral parameters in a pedestrian stream model to measured data. Safety Science, 2012, 50, 1253-1260.	4.9	39
9	Humans do not Always Act Selfishly: Social Identity and Helping in Emergency Evacuation Simulation. Transportation Research Procedia, 2014, 2, 585-593.	1.5	37
10	How cognitive heuristics can explain social interactions in spatial movement. Journal of the Royal Society Interface, 2016, 13, 20160439.	3.4	37
11	Vadere: An Open-Source Simulation Framework to Promote Interdisciplinary Understanding. Collective Dynamics, 0, 4, .	0.0	34
12	Bridging the gap: From cellular automata to differential equation models for pedestrian dynamics. Journal of Computational Science, 2014, 5, 841-846.	2.9	27
13	The effect of stepping on pedestrian trajectories. Physica A: Statistical Mechanics and Its Applications, 2015, 421, 594-604.	2.6	27
14	Predicting Pedestrian Flow: A Methodology and a Proof of Concept Based on Real-Life Data. PLoS ONE, 2013, 8, e83355.	2.5	26
15	How update schemes influence crowd simulations. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P07002.	2.3	24
16	Parsimony versus Reductionism: How Can Crowd Psychology be Introduced into Computer Simulation?. Review of General Psychology, 2017, 21, 95-102.	3.2	21
17	A Study of Pedestrian Stepping Behaviour for Crowd Simulation. Transportation Research Procedia, 2014, 2, 282-290.	1.5	17
18	Walking on stairs: Experiment and model. Physical Review E, 2019, 100, 022310.	2.1	15

#	ARTICLE	IF	CITATIONS
19	Pedestrian Group Behavior in a Cellular Automaton. , 2014, , 807-814.		15
20	Queuing at Bottlenecks Using a Dynamic Floor Field for Navigation. Transportation Research Procedia, 2014, 2, 344-352.	1.5	14
21	Validation of Crowd Models Including Social Groups. , 2014, , 1051-1063.		14
22	On Modeling Groups in Crowds: Empirical Evidence and Simulation Results Including Large Groups. , 2014, , 835-845.		12
23	Agent-based simulation of collective cooperation: from experiment to model. Journal of the Royal Society Interface, 2020, 17, 20200396.	3.4	11
24	datafold: data-driven models for point clouds and time series on manifolds. Journal of Open Source Software, 2020, 5, 2283.	4.6	11
25	Towards the Calibration of Pedestrian Stream Models. Lecture Notes in Computer Science, 2010, , 521-528.	1.3	8
26	FAST AND FLEXIBLE UNCERTAINTY QUANTIFICATION THROUGH A DATA-DRIVEN SURROGATE MODEL. , 2018, 8, 175-192.		7
27	Sensitivity Analysis for Microscopic Crowd Simulation. Algorithms, 2020, 13, 162.	2.1	6
28	The Superposition Principle: A Conceptual Perspective on Pedestrian Stream Simulations. Collective Dynamics, 0, 1, .	0.0	6
29	Bayesian inference methods to calibrate crowd dynamics models for safety applications. Safety Science, 2022, 147, 105586.	4.9	6
30	Social Distancing with the Optimal Steps Model. Collective Dynamics, 0, 6, .	0.0	6
31	Numerical Model Construction with Closed Observables. SIAM Journal on Applied Dynamical Systems, 2016, 15, 2078-2108.	1.6	5
32	How Do People Search: A Modelling Perspective. Lecture Notes in Computer Science, 2016, , 487-496.	1.3	4
33	Simulation vs. Testbed: Small Scale Experimental Validation of an Open-Source LTE-A Model. , 2020, , .		4
34	Modeling Melburniansâ€"Using the Koopman operator to gain insight into crowd dynamics. Transportation Research Part C: Emerging Technologies, 2021, 133, 103437.	7.6	4
35	Towards a Bidirectional Coupling of Pedestrian Dynamics and Mobile Communication Simulation. , 0, , .		4
36	Investigating the Randomness of Passengersâ€™ Seating Behavior in Suburban Trains. Entropy, 2019, 21, 600.	2.2	3

#	ARTICLE	IF	CITATIONS
37	A parallel generator for sparse unstructured meshes to solve the eikonal equation. Journal of Computational Science, 2019, 32, 141-147.	2.9	3
38	Dynamics of a Simulated Demonstration March: An Efficient Sensitivity Analysis. Sustainability, 2021, 13, 3455.	3.2	3
39	Is Slowing Down Enough to Model Movement on Stairs?. , 2016, , 35-42.		3
40	APPLYING BAYESIAN INVERSION WITH MARKOV CHAIN MONTE CARLO TO PEDESTRIAN DYNAMICS. , 2019, , .		3
41	Analysis of information dissemination through direct communication in a moving crowd. Safety Science, 2021, 142, 105386.	4.9	1
42	A Queuing Model Based on Social Attitudes. , 2016, , 193-200.		1
43	Bridging the Gap: From Cellular Automata to Differential Equation Models for Pedestrian Dynamics. Lecture Notes in Computer Science, 2014, , 659-668.	1.3	1
44	GPGPU Computing for Microscopic Pedestrian Simulation. Advances in Parallel Computing, 2020, , .	0.3	1
45	Toward learning dynamic origin-destination matrices from crowd density heatmaps. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 053401.	2.3	1
46	Improving the automatic congestion control functionality in SS7-signaling networks. Computer Networks, 2001, 36, 617-624.	5.1	0
47	Investigating Passengersâ€™ Seating Behavior in Suburban Trains. , 2019, , 405-413.		0
48	Towards Faster Navigation Algorithms on Floor Fields. , 2019, , 307-315.		0
49	Exploring Koopman Operator Based Surrogate Modelsâ€"Accelerating the Analysis of Critical Pedestrian Densities. Springer Proceedings in Physics, 2020, , 149-157.	0.2	0