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	Bayesian inference methods to calibrate crowd dynamics models for safety applications. Safety Science, 2022, 147, 105586.	4.9	6
2	Toward learning dynamic origin-destination matrices from crowd density heatmaps. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 053401.	2.3	1
3	Dynamics of a Simulated Demonstration March: An Efficient Sensitivity Analysis. Sustainability, 2021, 13, 3455.	3.2	3
4	Analysis of information dissemination through direct communication in a moving crowd. Safety Science, 2021, 142, 105386.	4.9	1
5	Modeling Melburniansâ€"Using the Koopman operator to gain insight into crowd dynamics. Transportation Research Part C: Emerging Technologies, 2021, 133, 103437.	7.6	4
6	Agent-based simulation of collective cooperation: from experiment to model. Journal of the Royal Society Interface, 2020, 17, 20200396.	3.4	11
7	Sensitivity Analysis for Microscopic Crowd Simulation. Algorithms, 2020, 13, 162.	2.1	6
8	Simulation vs. Testbed: Small Scale Experimental Validation of an Open-Source LTE-A Model. , 2020, , .		4
9	Exploring Koopman Operator Based Surrogate Modelsâ€"Accelerating the Analysis of Critical Pedestrian Densities. Springer Proceedings in Physics, 2020, , 149-157.	0.2	0
10	datafold: data-driven models for point clouds and time series on manifolds. Journal of Open Source Software, 2020, 5, 2283.	4.6	11
11	GPGPU Computing for Microscopic Pedestrian Simulation. Advances in Parallel Computing, 2020, , .	0.3	1
12	Investigating the Randomness of Passengersâ€™ Seating Behavior in Suburban Trains. Entropy, 2019, 21, 600.	2.2	3
13	Walking on stairs: Experiment and model. Physical Review E, 2019, 100, 022310.	2.1	15
14	A parallel generator for sparse unstructured meshes to solve the eikonal equation. Journal of Computational Science, 2019, 32, 141-147.	2.9	3
15	APPLYING BAYESIAN INVERSION WITH MARKOV CHAIN MONTE CARLO TO PEDESTRIAN DYNAMICS. , 2019, , .		3
16	Investigating Passengersâ€™ Seating Behavior in Suburban Trains. , 2019, , 405-413.		0
17	Towards Faster Navigation Algorithms on Floor Fields. , 2019, , 307-315.		0
18	FAST AND FLEXIBLE UNCERTAINTY QUANTIFICATION THROUGH A DATA-DRIVEN SURROGATE MODEL. , 2018, 8, 175-192.		7

#	ARTICLE	IF	CITATIONS
19	Parsimony versus Reductionism: How Can Crowd Psychology be Introduced into Computer Simulation?. Review of General Psychology, 2017, 21, 95-102.	3.2	21
20	Numerical Model Construction with Closed Observables. SIAM Journal on Applied Dynamical Systems, 2016, 15, 2078-2108.	1.6	5
21	Modelling social identification and helping in evacuation simulation. Safety Science, 2016, 89, 288-300.	4.9	61
22	How cognitive heuristics can explain social interactions in spatial movement. Journal of the Royal Society Interface, 2016, 13, 20160439.	3.4	37
23	How Do People Search: A Modelling Perspective. Lecture Notes in Computer Science, 2016, , 487-496.	1.3	4
24	A Queuing Model Based on Social Attitudes. , 2016, , 193-200.		1
25	Is Slowing Down Enough to Model Movement on Stairs?. , 2016, , 35-42.		3
26	The effect of stepping on pedestrian trajectories. Physica A: Statistical Mechanics and Its Applications, 2015, 421, 594-604.	2.6	27
27	Dynamic stride length adaptation according to utility and personal space. Transportation Research Part B: Methodological, 2015, 74, 104-117.	5.9	75
28	Humans do not Always Act Selfishly: Social Identity and Helping in Emergency Evacuation Simulation. Transportation Research Procedia, 2014, 2, 585-593.	1.5	37
29	Gradient navigation model for pedestrian dynamics. Physical Review E, 2014, 89, 062801.	2.1	64
30	Queuing at Bottlenecks Using a Dynamic Floor Field for Navigation. Transportation Research Procedia, 2014, 2, 344-352.	1.5	14
31	How update schemes influence crowd simulations. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P07002.	2.3	24
32	Bridging the gap: From cellular automata to differential equation models for pedestrian dynamics. Journal of Computational Science, 2014, 5, 841-846.	2.9	27
33	A Study of Pedestrian Stepping Behaviour for Crowd Simulation. Transportation Research Procedia, 2014, 2, 282-290.	1.5	17
34	Pedestrian Group Behavior in a Cellular Automaton. , 2014, , 807-814.		15
35	On Modeling Groups in Crowds: Empirical Evidence and Simulation Results Including Large Groups. , 2014, , 835-845.		12
36	Validation of Crowd Models Including Social Groups. , 2014, , 1051-1063.		14

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37	Bridging the Gap: From Cellular Automata to Differential Equation Models for Pedestrian Dynamics. Lecture Notes in Computer Science, 2014, , 659-668.	1.3	1
38	Avoiding numerical pitfalls in social force models. Physical Review E, 2013, 87, 063305.	2.1	61
39	Predicting Pedestrian Flow: A Methodology and a Proof of Concept Based on Real-Life Data. PLoS ONE, 2013, 8, e83355.	2.5	26
40	Natural discretization of pedestrian movement in continuous space. Physical Review E, 2012, 86, 046108.	2.1	133
41	Bidirectional coupling of macroscopic and microscopic pedestrian evacuation models. Safety Science, 2012, 50, 1695-1703.	4.9	40
42	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
43	On modelling the influence of group formations in a crowd. Contemporary Social Science, 2011, 6, 397-414.	1.9	80
44	Towards the Calibration of Pedestrian Stream Models. Lecture Notes in Computer Science, 2010, , 521-528.	1.3	8
45	Improving the automatic congestion control functionality in SS7-signaling networks. Computer Networks, 2001, 36, 617-624.	5.1	0
46	The Superposition Principle: A Conceptual Perspective on Pedestrian Stream Simulations. Collective Dynamics, 0, 1, .	0.0	6
47	Vadere: An Open-Source Simulation Framework to Promote Interdisciplinary Understanding. Collective Dynamics, 0, 4, .	0.0	34
48	Social Distancing with the Optimal Steps Model. Collective Dynamics, 0, 6, .	0.0	6
49	Towards a Bidirectional Coupling of Pedestrian Dynamics and Mobile Communication Simulation. , 0, , .		4