Alison Jane Heppenstall

List of Publications by Year
in descending order

84 papers	1,875 citations	257450 24 h-index	315739 38 g-index
87 all docs	87 docs citations	87 times ranked	1746 citing authors

#	Article	IF	Citations
1	Modelling built-up expansion and densification with multinomial logistic regression, cellular automata and genetic algorithm. Computers, Environment and Urban Systems, 2018, 67, 147-156.	7.1	128
2	Introduction to Agent-Based Modelling. , 2012, , 85-105.		126
3	Calibration of a fuzzy cellular automata model of urban dynamics in Saudi Arabia. Ecological Complexity, 2009, 6, 80-101.	2.9	125
4	A spatiotemporal and graph-based analysis of dockless bike sharing patterns to understand urban flows over the last mile. Computers, Environment and Urban Systems, 2019, 77, 101361.	7.1	95
5	Crime reduction through simulation: An agent-based model of burglary. Computers, Environment and Urban Systems, 2010, 34, 236-250.	7.1	92
6	Creating Realistic Synthetic Populations at Varying Spatial Scales: A Comparative Critique of Population Synthesis Techniques. Jasss, 2012, 15, .	1.8	88
7	Challenges, tasks, and opportunities in modeling agent-based complex systems. Ecological Modelling, 2021, 457, 109685.	2.5	65
8	Genetic Algorithm Optimisation of An Agent-Based Model for Simulating a Retail Market. Environment and Planning B: Planning and Design, 2007, 34, 1051-1070.	1.7	59
9	â€œSpace, the Final Frontierâ€: How Good are Agent-Based Models at Simulating Individuals and Space in Cities?. Systems, 2016, 4, 9.	2.3	56
10	Using graph structural information about flows to enhance short-term demand prediction in bike-sharing systems. Computers, Environment and Urban Systems, 2020, 83, 101521.	7.1	52
11	Timing error correction procedure applied to neural network rainfallâ€"runoff modelling. Hydrological Sciences Journal, 2007, 52, 414-431.	2.6	51
12	Daily travel behaviour in Beijing, China: An analysis of workers' trip chains, and the role of socio-demographics and urban form. Habitat International, 2014, 43, 263-273.	5.8	51
13	A conceptual and neural network model for real-time flood forecasting of the Tiber River in Rome. Physics and Chemistry of the Earth, 2010, 35, 187-194.	2.9	45
14	Sociodemographic and spatial disaggregation of e-commerce channel use in the grocery market in Great Britain. Journal of Retailing and Consumer Services, 2020, 55, 102076.	9.4	43
15	Synthesising carbon emission for mega-cities: A static spatial microsimulation of transport CO2 from urban travel in Beijing. Computers, Environment and Urban Systems, 2014, 45, 78-88.	7.1	40
16	Future Developments in Geographical Agentâ€Based Models: Challenges and Opportunities. Geographical Analysis, 2021, 53, 76-91.	3.5	40
17	Symbiotic adaptive neuro-evolution applied to rainfallâ€"runoff modelling in northern England. Neural Networks, 2006, 19, 236-247.	5.9	39
18	Using an Agent-Based Crime Simulation to Predict the Effects of Urban Regeneration on Individual Household Burglary Risk. Environment and Planning B: Planning and Design, 2013, 40, 405-426.	1.7	38

#	Article	IF	Citations
19	Implementing comprehensive offender behaviour in a realistic agent-based model of burglary. Simulation, 2012, 88, 50-71.	1.8	35
20	A Hybrid Multi-Agent/Spatial Interaction Model System for Petrol Price Setting. Transactions in GIS, 2005, 9, 35-51.	2.3	34
21	DAG-informed regression modelling, agent-based modelling and microsimulation modelling: a critical comparison of methods for causal inference. International Journal of Epidemiology, 2019, 48, 243-253.	1.9	34
22	A Fuzzy Cellular Automata Urban Growth Model (FCAUGM) for the City of Riyadh, Saudi Arabia. Part 1: Model Structure and Validation. Applied Spatial Analysis and Policy, 2009, 2, 65-83.	2.0	32
23	A geodemographic classification of sub-districts to identify education inequality in Central Beijing. Computers, Environment and Urban Systems, 2018, 70, 59-70.	7.1	30
24	Dealing with uncertainty in agent-based models for short-term predictions. Royal Society Open Science, 2020, 7, 191074.	2.4	30
25	Who, Where, Why and When? Using Smart Card and Social Media Data to Understand Urban Mobility. ISPRS International Journal of Geo-Information, 2019, 8, 271.	2.9	29
26	Perspectives on Agent-Based Models and Geographical Systems. , 2012, , 1-15.		27
27	Measuring and Assessing Regional Education Inequalities in China under Changing Policy Regimes. Applied Spatial Analysis and Policy, 2020, 13, 91-112.	2.0	23
28	Methodological Issues of Spatial Agent-Based Models. Jasss, 2020, 23, .	1.8	23
29	A Fuzzy Cellular Automata Urban Growth Model (FCAUGM) for the City of Riyadh, Saudi Arabia. Part 2: Scenario Testing. Applied Spatial Analysis and Policy, 2009, 2, 85-105.	2.0	20
30	More bark than bytes? Reflections on 21+ years of geocomputation. Environment and Planning B: Urban Analytics and City Science, 2017, 44, 598-617.	2.0	20
31	The SIPHER Consortium: Introducing the new UK hub for systems science in public health and health economic research. Wellcome Open Research, 2019, 4, 174.	1.8	20
32	Agent-Based Modeling. , 2018, , 218-243.		19
33	Modelling Individual Evacuation Decisions during Natural Disasters: A Case Study of Volcanic Crisis in Merapi, Indonesia. Geosciences (Switzerland), 2018, 8, 196.	2.2	18
34	Exploring transport carbon futures using population microsimulation and travel diaries: Beijing to 2030. Transportation Research, Part D: Transport and Environment, 2015, 37, 108-122.	6.8	17
35	Simulating Crowds in Real Time with Agent-Based Modelling and a Particle Filter. Jasss, 2020, 23, .	1.8	17
36	Evaluating the potential of agent-based modelling to capture consumer grocery retail store choice behaviours. International Review of Retail, Distribution and Consumer Research, 2018, 28, 27-46.	2.0	14

#	Article	IF	Citations
37	Extending Spatial Interaction Models with Agents for Understanding Relationships in a Dynamic Retail Market. Urban Studies Research, 2011, 2011, 1-12.	0.6	13
38	Understanding Simulation Results. Understanding Complex Systems, 2013, , 173-195.	0.6	11
39	Developing an Individual-level Geodemographic Classification. Applied Spatial Analysis and Policy, 2018, 11, 417-437.	2.0	11
40	Estimating the effects of lockdown timing on COVID-19 cases and deaths in England: A counterfactual modelling study. PLoS ONE, 2022, 17, e0263432.	2.5	11
41	Understanding the impacts of public transit disruptions on bikeshare schemes and cycling behaviours using spatiotemporal and graph-based analysis: A case study of four London Tube strikes. Journal of Transport Geography, 2022, 98, 103255.	5.0	10
42	Sub regional estimates of morbidities in the English elderly population. Health and Place, 2014, 27, 176-185.	3.3	9
43	Using Agent-Based Models for Education Planning: Is the UK Education System Agent Based?. , 2012, , 481-497.		8
44	An agent model of urban economics: Digging into emergence. Computers, Environment and Urban Systems, 2015, 54, 414-427.	7.1	8
45	Agent-Based Modeling and the City: A Gallery of Applications. Urban Book Series, 2021, , 885-910.	0.6	8
46	Towards Real-Time Crowd Simulation Under Uncertainty Using an Agent-Based Model and an Unscented Kalman Filter. Lecture Notes in Computer Science, 2020, , 68-79.	1.3	8
47	Guest editorial for spatial agent-based models: current practices and future trends. GeoInformatica, 2019, 23, 163-167.	2.7	7
48	Simulating Spatial Dynamics and Processes in a Retail Gasoline Market: An Agent�Based Modeling Approach. Transactions in GIS, 2013, 17, 661-682.	2.3	6
49	Analysing trajectories of a longitudinal exposure: A causal perspective on common methods in lifecourse research. PLoS ONE, 2019, 14, e0225217.	2.5	6
50	The spatial economics of energy justice: modelling the trade impacts of increased transport costs in a low carbon transition and the implications for UK regional inequality. Energy Policy, 2020, 140, 111378.	8.8	6
51	Impacts of multiple stressors on mountain communities: Insights from an agent-based model of a Nepalese village. Global Environmental Change, 2021, 66, 102203.	7.8	6
52	A synthetic population dataset for estimating small area health and socio-economic outcomes in Great Britain. Scientific Data, 2022, 9, 19.	5.3	6
53	Exploring the Impact of Driver Adherence to Speed Limits and the Interdependence of Roadside Collisions in an Urban Environment: An Agent-Based Modelling Approach. Applied Sciences (Switzerland), 2021, 11, 5336.	2.5	4
54	Optimising an Agent-Based Model to Explore the Behaviour of Simulated Burglars. Intelligent Systems Reference Library, 2014, , 179-204.	1.2	4

#	Article	IF	Citations
55	Reflections and Conclusions: Geographical Models to Address Grand Challenges. , 2012, , 739-747.		4
56	Last-Mile Capacity Constraints in Online Grocery Fulfilment in Great Britain. Journal of Theoretical and Applied Electronic Commerce Research, 2022, 17, 636-651.	5.7	4
57	Neuroevolution Applied to River Level Forecasting Under Winter Flood and Drought Conditions. Journal of Intelligent Systems, 2007, 16, .	1.6	3
58	CA City: Simulating Urban Growth through the Application of Cellular Automata. , 0, , .		3
59	Validating Spatial Patterns of Urban Growth from a Cellular Automata Model. , 0, , .		3
60	Understanding Simulation Results. Understanding Complex Systems, 2017, , 205-227.	0.6	3
61	Equitable or elitist? The social impact of the 2014 Tour de France Grand Départ. Area, 2017, 49, 60-68.	1.6	3
62	Diversity and burglary: Do community differences matter?. Transactions in GIS, 2019, 23, 181-202.	2.3	3
63	How Well Does Western Environmental Theory Explain Crime in the Arabian Context? The Case Study of Riyadh, Saudi Arabia. International Criminal Justice Review, 2019, 29, 5-32.	1.1	3
64	Estimates of the Ambient Population: Assessing the Utility of Conventional and Novel Data Sources. ISPRS International Journal of Geo-Information, 2021, 10, 131.	2.9	3
65	Agent Based Exploration of Urban Economic Dynamics Under the Rent-Gap Hypotheses. Lecture Notes in Computer Science, 2015, , 213-227.	1.3	3
66	The Use of Hybrid Agent Based Systems to Model Petrol Markets. , 2005, , 182-193.		2
67	Moses: An Innovative Way to Model Heterogeneity in Complex Social Systems. , 2010, , .		2
68	Adjustment for time-invariant and time-varying confounders in â€˜unexplained residualsâ€™ models for longitudinal data within a causal framework and associated challenges. Statistical Methods in Medical Research, 2019, 28, 1347-1364.	1.5	2
69	An empirically informed agent-based model of a Nepalese smallholder village. MethodsX, 2021, 8, 101276.	1.6	2
70	Estimating Health over Space and Time: A Review of Spatial Microsimulation Applied to Public Health. J, 2021, 4, 182-192.	0.9	2
71	Data assimilation and agent-based modelling: towards the incorporation of categorical agent parameters. Open Research Europe, 0, 1, 131.	2.0	2
72	Making Space in Geographical Analysis. Geographical Analysis, 2023, 55, 325-341.	3.5	2

#	ARTICLE	IF	CITATIONS
73	Estimating the social and spatial impacts of Covid mitigation strategies in United Kingdom regions: synthetic data and dashboards. Cambridge Journal of Regions, Economy and Society, 2022, 15, 683-702.	3.0	2
74	An Agent-Based Model of Heterogeneous Driver Behaviour and Its Impact on Energy Consumption and Costs in Urban Space. Energies, 2022, 15, 4031.	3.1	2
75	Making the case for simulation: Unlocking carbon reduction through simulation of individual â€˜middle actorâ€™ behaviour. Environment and Planning B: Urban Analytics and City Science, 2020, 47, 457-472.	2.0	1
76	Simplifying the interpretation of continuous time models for spatio-temporal networks. Journal of Geographical Systems, 0, , 1.	3.1	1
77	Spatial Microsimulation. , 2014, , 1235-1252.		1
78	The utility of multilevel models for continuous-time feature selection of spatio-temporal networks. Computers, Environment and Urban Systems, 2022, 91, 101728.	7.1	1
79	Spatial Microsimulation. , 2021, , 1767-1784.		0
80	Spatial Microsimulation. , 2018, , 1-18.		0
81	Title is missing!. , 2019, 14, e0225217.		0
82	Title is missing!. , 2019, 14, e0225217.		0
83	Title is missing!. , 2019, 14, e0225217.		0
84	Title is missing!. , 2019, 14, e0225217.		0