

# Alison Jane Heppenstall

## List of Publications by Year in descending order

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Version: 2024-02-01

84  
papers

1,875  
citations

257429

24  
h-index

315719

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. <i>Computers, Environment and Urban Systems</i> , 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. <i>Ecological Complexity</i> , 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. <i>Computers, Environment and Urban Systems</i> , 2019, 77, 101361.	7.1	95
5	Crime reduction through simulation: An agent-based model of burglary. <i>Computers, Environment and Urban Systems</i> , 2010, 34, 236-250.	7.1	92
6	Creating Realistic Synthetic Populations at Varying Spatial Scales: A Comparative Critique of Population Synthesis Techniques. <i>Jasss</i> , 2012, 15, .	1.8	88
7	Challenges, tasks, and opportunities in modeling agent-based complex systems. <i>Ecological Modelling</i> , 2021, 457, 109685.	2.5	65
8	Genetic Algorithm Optimisation of An Agent-Based Model for Simulating a Retail Market. <i>Environment and Planning B: Planning and Design</i> , 2007, 34, 1051-1070.	1.7	59
9	“Space, the Final Frontier”: How Good are Agent-Based Models at Simulating Individuals and Space in Cities?. <i>Systems</i> , 2016, 4, 9.	2.3	56
10	Using graph structural information about flows to enhance short-term demand prediction in bike-sharing systems. <i>Computers, Environment and Urban Systems</i> , 2020, 83, 101521.	7.1	52
11	Timing error correction procedure applied to neural network rainfall-runoff modelling. <i>Hydrological Sciences Journal</i> , 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. <i>Habitat International</i> , 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. <i>Physics and Chemistry of the Earth</i> , 2010, 35, 187-194.	2.9	45
14	Sociodemographic and spatial disaggregation of e-commerce channel use in the grocery market in Great Britain. <i>Journal of Retailing and Consumer Services</i> , 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. <i>Computers, Environment and Urban Systems</i> , 2014, 45, 78-88.	7.1	40
16	Future Developments in Geographical Agent-Based Models: Challenges and Opportunities. <i>Geographical Analysis</i> , 2021, 53, 76-91.	3.5	40
17	Symbiotic adaptive neuro-evolution applied to rainfall-runoff modelling in northern England. <i>Neural Networks</i> , 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. <i>Environment and Planning B: Planning and Design</i> , 2013, 40, 405-426.	1.7	38

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19	Implementing comprehensive offender behaviour in a realistic agent-based model of burglary. <i>Simulation</i> , 2012, 88, 50-71.	1.8	35
20	A Hybrid Multi-Agent/Spatial Interaction Model System for Petrol Price Setting. <i>Transactions in GIS</i> , 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. <i>International Journal of Epidemiology</i> , 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. <i>Applied Spatial Analysis and Policy</i> , 2009, 2, 65-83.	2.0	32
23	A geodemographic classification of sub-districts to identify education inequality in Central Beijing. <i>Computers, Environment and Urban Systems</i> , 2018, 70, 59-70.	7.1	30
24	Dealing with uncertainty in agent-based models for short-term predictions. <i>Royal Society Open Science</i> , 2020, 7, 191074.	2.4	30
25	Who, Where, Why and When? Using Smart Card and Social Media Data to Understand Urban Mobility. <i>ISPRS International Journal of Geo-Information</i> , 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. <i>Applied Spatial Analysis and Policy</i> , 2020, 13, 91-112.	2.0	23
28	Methodological Issues of Spatial Agent-Based Models. <i>Jasss</i> , 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. <i>Applied Spatial Analysis and Policy</i> , 2009, 2, 85-105.	2.0	20
30	More bark than bytes? Reflections on 21+ years of geocomputation. <i>Environment and Planning B: Urban Analytics and City Science</i> , 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. <i>Wellcome Open Research</i> , 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. <i>Geosciences (Switzerland)</i> , 2018, 8, 196.	2.2	18
34	Exploring transport carbon futures using population microsimulation and travel diaries: Beijing to 2030. <i>Transportation Research, Part D: Transport and Environment</i> , 2015, 37, 108-122.	6.8	17
35	Simulating Crowds in Real Time with Agent-Based Modelling and a Particle Filter. <i>Jasss</i> , 2020, 23, .	1.8	17
36	Evaluating the potential of agent-based modelling to capture consumer grocery retail store choice behaviours. <i>International Review of Retail, Distribution and Consumer Research</i> , 2018, 28, 27-46.	2.0	14

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37	Extending Spatial Interaction Models with Agents for Understanding Relationships in a Dynamic Retail Market. <i>Urban Studies Research</i> , 2011, 2011, 1-12.	0.6	13
38	Understanding Simulation Results. <i>Understanding Complex Systems</i> , 2013, , 173-195.	0.6	11
39	Developing an Individual-level Geodemographic Classification. <i>Applied Spatial Analysis and Policy</i> , 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. <i>PLoS ONE</i> , 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. <i>Journal of Transport Geography</i> , 2022, 98, 103255.	5.0	10
42	Sub regional estimates of morbidities in the English elderly population. <i>Health and Place</i> , 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. <i>Computers, Environment and Urban Systems</i> , 2015, 54, 414-427.	7.1	8
45	Agent-Based Modeling and the City: A Gallery of Applications. <i>Urban Book Series</i> , 2021, , 885-910.	0.6	8
46	Towards Real-Time Crowd Simulation Under Uncertainty Using an Agent-Based Model and an Unscented Kalman Filter. <i>Lecture Notes in Computer Science</i> , 2020, , 68-79.	1.3	8
47	Guest editorial for spatial agent-based models: current practices and future trends. <i>GeoInformatica</i> , 2019, 23, 163-167.	2.7	7
48	Simulating Spatial Dynamics and Processes in a Retail Gasoline Market: An Agent-Based Modeling Approach. <i>Transactions in GIS</i> , 2013, 17, 661-682.	2.3	6
49	Analysing trajectories of a longitudinal exposure: A causal perspective on common methods in lifecourse research. <i>PLoS ONE</i> , 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. <i>Energy Policy</i> , 2020, 140, 111378.	8.8	6
51	Impacts of multiple stressors on mountain communities: Insights from an agent-based model of a Nepalese village. <i>Global Environmental Change</i> , 2021, 66, 102203.	7.8	6
52	A synthetic population dataset for estimating small area health and socio-economic outcomes in Great Britain. <i>Scientific Data</i> , 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. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 5336.	2.5	4
54	Optimising an Agent-Based Model to Explore the Behaviour of Simulated Burglars. <i>Intelligent Systems Reference Library</i> , 2014, , 179-204.	1.2	4

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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 DÃ©part. 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 "unexplained residuals" 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

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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 actor 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