Xiaoping Liu

List of Publications by Year
in descending order

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98 papers	9,857 citations	34076 52 h-index	36008 97 g-index
98 all docs	98 docs citations	98 times ranked	5871 citing authors

#	Article	IF	Citations
1	A future land use simulation model (FLUS) for simulating multiple land use scenarios by coupling human and natural effects. Landscape and Urban Planning, 2017, 168, 94-116.	3.4	940
2	Annual maps of global artificial impervious area (GAIA) between 1985 and 2018. Remote Sensing of Environment, 2020, 236, 111510.	4.6	535
3	High-resolution multi-temporal mapping of global urban land using Landsat images based on the Google Earth Engine Platform. Remote Sensing of Environment, 2018, 209, 227-239.	4.6	448
4	High-spatiotemporal-resolution mapping of global urban change from 1985 to 2015. Nature Sustainability, 2020, 3, 564-570.	11.5	391
5	A new landscape index for quantifying urban expansion using multi-temporal remotely sensed data. Landscape Ecology, 2010, 25, 671-682.	1.9	338
6	Global projections of future urban land expansion under shared socioeconomic pathways. Nature Communications, 2020, 11, 537.	5.8	336
7	Examining the impacts of socioeconomic factors, urban form, and transportation networks on CO2 emissions in Chinaâ€™s megacities. Applied Energy, 2017, 185, 189-200.	5.1	306
8	Sensing spatial distribution of urban land use by integrating points-of-interest and Google Word2Vec model. International Journal of Geographical Information Science, 2017, 31, 825-848.	2.2	306
9	Delineating multi-scenario urban growth boundaries with a CA-based FLUS model and morphological method. Landscape and Urban Planning, 2018, 177, 47-63.	3.4	301
10	Classifying urban land use by integrating remote sensing and social media data. International Journal of Geographical Information Science, 2017, 31, 1675-1696.	2.2	231
11	Simulating urban growth by integrating landscape expansion index (LEI) and cellular automata. International Journal of Geographical Information Science, 2014, 28, 148-163.	2.2	212
12	A New Global Land-Use and Land-Cover Change Product at a 1-km Resolution for 2010 to 2100 Based on Humanâ€“Environment Interactions. Annals of the American Association of Geographers, 2017, 107, 1040-1059.	1.5	206
13	Quantifying the relationship between urban forms and carbon emissions using panel data analysis. Landscape Ecology, 2013, 28, 1889-1907.	1.9	199
14	Modeling urban land-use dynamics in a fast developing city using the modified logistic cellular automaton with a patch-based simulation strategy. International Journal of Geographical Information Science, 2014, 28, 234-255.	2.2	194
15	Delineating urban functional areas with building-level social media data: A dynamic time warping (DTW) distance based k -medoids method. Landscape and Urban Planning, 2017, 160, 48-60.	3.4	179
16	Urban heat island: Aerodynamics or imperviousness?. Science Advances, 2019, 5, eaau4299.	4.7	179
17	Urban growth simulation by incorporating planning policies into a CA-based future land-use simulation model. International Journal of Geographical Information Science, 2018, 32, 2294-2316.	2.2	177
18	Improved population mapping for China using remotely sensed and points-of-interest data within a random forests model. Science of the Total Environment, 2019, 658, 936-946.	3.9	166

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19	Contribution of urbanization to the increase of extreme heat events in an urban agglomeration in east China. Geophysical Research Letters, 2017, 44, 6940-6950.	1.5	161
20	A bottomâ€up approach to discover transition rules of cellular automata using ant intelligence. International Journal of Geographical Information Science, 2008, 22, 1247-1269.	2.2	156
21	Simulating complex urban development using kernel-based non-linear cellular automata. Ecological Modelling, 2008, 211, 169-181.	1.2	141
22	A Deeply Supervised Attention Metric-Based Network and an Open Aerial Image Dataset for Remote Sensing Change Detection. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	2.7	135
23	Building Footprint Extraction from High-Resolution Images via Spatial Residual Inception Convolutional Neural Network. Remote Sensing, 2019, 11, 830.	1.8	134
24	Discovering and evaluating urban signatures for simulating compact development using cellular automata. Landscape and Urban Planning, 2008, 86, 177-186.	3.4	108
25	Direct and indirect loss of natural habitat due to built-up area expansion: A model-based analysis for the city of Wuhan, China. Land Use Policy, 2018, 74, 231-239.	2.5	106
26	Land-cover mapping using Random Forest classification and incorporating NDVI time-series and texture: a case study of central Shandong. International Journal of Remote Sensing, 2018, 39, 8703-8723.	1.3	103
27	Global impacts of future urban expansion on terrestrial vertebrate diversity. Nature Communications, 2022, 13, 1628.	5.8	103
28	Simulating land-use dynamics under planning policies by integrating artificial immune systems with cellular automata. International Journal of Geographical Information Science, 2010, 24, 783-802.	2.2	102
29	Capturing the varying effects of driving forces over time for the simulation of urban growth by using survival analysis and cellular automata. Landscape and Urban Planning, 2016, 152, 59-71.	3.4	102
30	Stronger Contributions of Urbanization to Heat Wave Trends in Wet Climates. Geophysical Research Letters, 2018, 45, 11,310.	1.5	93
31	Impacts of Urban Expansion on Terrestrial Carbon Storage in China. Environmental Science & Technology, 2019, 53, 6834-6844.	4.6	90
32	Cumulative Effects of Climatic Factors on Terrestrial Vegetation Growth. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 789-806.	1.3	90
33	An extended cellular automaton using caseâ€based reasoning for simulating urban development in a large complex region. International Journal of Geographical Information Science, 2006, 20, 1109-1136.	2.2	88
34	Projections of land use changes under the plant functional type classification in different SSP-RCP scenarios in China. Science Bulletin, 2020, 65, 1935-1947.	4.3	86
35	A systematic sensitivity analysis of constrained cellular automata model for urban growth simulation based on different transition rules. International Journal of Geographical Information Science, 2014, 28, 1317-1335.	2.2	79
36	Tele-connecting China's future urban growth to impacts on ecosystem services under the shared socioeconomic pathways. Science of the Total Environment, 2019, 652, 765-779.	3.9	79

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37	An improved artificial immune system for seeking the Pareto front of land-use allocation problem in large areas. International Journal of Geographical Information Science, 2013, 27, 922-946.	2.2	78
38	Calibrating cellular automata based on landscape metrics by using genetic algorithms. International Journal of Geographical Information Science, 2013, 27, 594-613.	2.2	78
39	Coupling urban cellular automata with ant colony optimization for zoning protected natural areas under a changing landscape. International Journal of Geographical Information Science, 2011, 25, 575-593.	2.2	75
40	Simulating urban land-use changes at a large scale by integrating dynamic land parcel subdivision and vector-based cellular automata. International Journal of Geographical Information Science, 2017, 31, 2452-2479.	2.2	74
41	30 m global impervious surface area dynamics and urban expansion pattern observed by Landsat satellites: From 1972 to 2019. Science China Earth Sciences, 2021, 64, 1922-1933.	2.3	74
42	Concepts, methodologies, and tools of an integrated geographical simulation and optimization system. International Journal of Geographical Information Science, 2011, 25, 633-655.	2.2	73
43	A Normalized Urban Areas Composite Index (NUACI) Based on Combination of DMSP-OLS and MODIS for Mapping Impervious Surface Area. Remote Sensing, 2015, 7, 17168-17189.	1.8	73
44	Road Detection From Remote Sensing Images by Generative Adversarial Networks. IEEE Access, 2018, 6, 25486-25494.	2.6	71
45	A cellular automata downscaling based 1 km global land use datasets (2010â€“2100). Science Bulletin, 2016, 61, 1651-1661.	4.3	68
46	Multiple intra-urban land use simulations and driving factors analysis: a case study in Huicheng, China. GIScience and Remote Sensing, 2019, 56, 282-308.	2.4	68
47	Deep Subpixel Mapping Based on Semantic Information Modulated Network for Urban Land Use Mapping. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 10628-10646.	2.7	62
48	Domain Adaption for Fine-Grained Urban Village Extraction From Satellite Images. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 1430-1434.	1.4	60
49	Simulating urban growth boundaries using a patch-based cellular automaton with economic and ecological constraints. International Journal of Geographical Information Science, 2019, 33, 55-80.	2.2	57
50	Parallel cellular automata for large-scale urban simulation using load-balancing techniques. International Journal of Geographical Information Science, 2010, 24, 803-820.	2.2	56
51	The Impact of Energy Consumption on the Surface Urban Heat Island in Chinaâ€™s 32 Major Cities. Remote Sensing, 2017, 9, 250.	1.8	56
52	Experiences and issues of using cellular automata for assisting urban and regional planning in China. International Journal of Geographical Information Science, 2017, 31, 1606-1629.	2.2	55
53	Non-uniform time-lag effects of terrestrial vegetation responses to asymmetric warming. Agricultural and Forest Meteorology, 2018, 252, 130-143.	1.9	53
54	Discovery of transition rules for geographical cellular automata by using ant colony optimization. Science in China Series D: Earth Sciences, 2007, 50, 1578-1588.	0.9	52

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55	Intelligent GIS for solving highâ€dimensional site selection problems using ant colony optimization techniques. International Journal of Geographical Information Science, 2009, 23, 399-416.	2.2	51
56	Estimated influence of urbanization on surface warming in Eastern China using timeâ€varying land use data. International Journal of Climatology, 2017, 37, 3197-3208.	1.5	50
57	A CA-based land system change model: LANDSCAPE. International Journal of Geographical Information Science, 2017, 31, 1798-1817.	2.2	45
58	Integrating ensemble-urban cellular automata model with an uncertainty map to improve the performance of a single model. International Journal of Geographical Information Science, 2015, 29, 762-785.	2.2	44
59	Integrating multi-source big data to infer building functions. International Journal of Geographical Information Science, 0, , 1-20.	2.2	44
60	Simulating urban dynamics in China using a gradient cellular automata model based on S-shaped curve evolution characteristics. International Journal of Geographical Information Science, 2018, 32, 73-101.	2.2	44
61	Coupling fuzzy clustering and cellular automata based on local maxima of development potential to model urban emergence and expansion in economic development zones. International Journal of Geographical Information Science, 2020, 34, 1930-1952.	2.2	44
62	The delineation of urban growth boundaries in complex ecological environment areas by using cellular automata and a dual-environmental evaluation. Journal of Cleaner Production, 2020, 256, 120361.	4.6	42
63	Early warning of illegal development for protected areas by integrating cellular automata with neural networks. Journal of Environmental Management, 2013, 130, 106-116.	3.8	39
64	A maximum entropy method to extract urban land by combining MODIS reflectance, MODIS NDVI, and DMSP-OLS data. International Journal of Remote Sensing, 2014, 35, 6708-6727.	1.3	38
65	An agent-based model for optimal land allocation (AgentLA) with a contiguity constraint. International Journal of Geographical Information Science, 2010, 24, 1269-1288.	2.2	37
66	Urban Land Use and Land Cover Classification Using Multisource Remote Sensing Images and Social Media Data. Remote Sensing, 2019, 11, 2719.	1.8	36
67	Geospatial Big Data: New Paradigm of Remote Sensing Applications. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 3841-3851.	2.3	35
68	Global land projection based on plant functional types with a 1-km resolution under socio-climatic scenarios. Scientific Data, 2022, 9, 125.	2.4	33
69	Simulating Urban Form and Energy Consumption in the Pearl River Delta Under Different Development Strategies. Annals of the American Association of Geographers, 2013, 103, 1567-1585.	3.0	31
70	Exploring the response of net primary productivity variations to urban expansion and climate change: A scenario analysis for Guangdong Province in China. Journal of Environmental Management, 2015, 150, 92-102.	3.8	31
71	Calibrating a Land Parcel Cellular Automaton (LP-CA) for urban growth simulation based on ensemble learning. International Journal of Geographical Information Science, 2017, 31, 2480-2504.	2.2	31
72	Spatial and Temporal Dynamics of Urban Expansion along the Guangzhouâ€“Foshan Inter-City Rail Transit Corridor, China. Sustainability, 2018, 10, 593.	1.6	31

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73	Amplified Increases of Compound Hot Extremes Over Urban Land in China. Geophysical Research Letters, 2021, 48, e2020GL091252.	1.5	28
74	One-class remote sensing classification: one-class vs. binary classifiers. International Journal of Remote Sensing, 2018, 39, 1890-1910.	1.3	27
75	Future â€œlocal climate zoneâ€•spatial change simulation in Greater Bay Area under the shared socioeconomic pathways and ecological control line. Building and Environment, 2021, 203, 108077.	3.0	24
76	Aggregative model-based classifier ensemble for improving land-use/cover classification of Landsat TM Images. International Journal of Remote Sensing, 2014, 35, 1481-1495.	1.3	23
77	Global protected areas boost the carbon sequestration capacity: Evidences from econometric causal analysis. Science of the Total Environment, 2020, 715, 137001.	3.9	23
78	Simulating mixed land-use change under multi-label concept by integrating a convolutional neural network and cellular automata: a case study of Huizhou, China. GIScience and Remote Sensing, 2022, 59, 609-632.	2.4	23
79	Global snow cover estimation with Microwave Brightness Temperature measurements and one-class in situ observations. Remote Sensing of Environment, 2016, 182, 227-251.	4.6	20
80	Assimilating process context information of cellular automata into change detection for monitoring land use changes. International Journal of Geographical Information Science, 2012, 26, 1667-1687.	2.2	19
81	Will the Development of a High-Speed Railway Have Impacts on Land Use Patterns in China?. Annals of the American Association of Geographers, 2019, 109, 979-1005.	1.5	19
82	GPU-CA model for large-scale land-use change simulation. Science Bulletin, 2012, 57, 2442-2452.	1.7	17
83	Simulation of spatial population dynamics based on labor economics and multi-agent systems: a case study on a rapidly developing manufacturing metropolis. International Journal of Geographical Information Science, 2013, 27, 2410-2435.	2.2	17
84	Mapping the annual dynamics of cultivated land in typical area of the Middle-lower Yangtze plain using long time-series of Landsat images based on Google Earth Engine. International Journal of Remote Sensing, 2020, 41, 1625-1644.	1.3	17
85	Influence of urbanization on hourly extreme precipitation over China. Environmental Research Letters, 2022, 17, 044010.	2.2	17
86	Developing a data-fusing method for mapping fine-scale urban three-dimensional building structure. Sustainable Cities and Society, 2022, 80, 103716.	5.1	16
87	Nonuniform Time-Lag Effects of Asymmetric Warming on Net Primary Productivity across Global Terrestrial Biomes. Earth Interactions, 2018, 22, 1-26.	0.7	14
88	Simulating multiple urban land use changes by integrating transportation accessibility and a vector-based cellular automata: a case study on city of Toronto. Geo-Spatial Information Science, 2022, 25, 439-456.	2.4	12
89	Critical role of temporal contexts in evaluating urban cellular automata models. GIScience and Remote Sensing, 2021, 58, 799-811.	2.4	10
90	Self-modifying CA model using dual ensemble Kalman filter for simulating urban land-use changes. International Journal of Geographical Information Science, 2015, 29, 1612-1631.	2.2	9

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91	Integrating a deep forest algorithm with vectorâ€based cellular automata for urban land change simulation. Transactions in GIS, 2022, 26, 2056-2080.	1.0	8
92	Assessing the contributions of climate change and human activities to cropland productivity by means of remote sensing. International Journal of Remote Sensing, 2020, 41, 2004-2021.	1.3	6
93	Exploring the performance of spatio-temporal assimilation in an urban cellular automata model. International Journal of Geographical Information Science, 2017, 31, 2195-2215.	2.2	5
94	Three-Dimensional Simulation Model for Synergistically Simulating Urban Horizontal Expansion and Vertical Growth. Remote Sensing, 2022, 14, 1503.	1.8	5
95	Does the Belt and Road Initiative Really Increase CO₂ Emissions?. Annals of the American Association of Geographers, 2022, 112, 948-967.	1.5	3
96	Tensorâ€CA: A highâ€performance cellular automata model for land use simulation based on vectorization and GPU. Transactions in GIS, 2022, 26, 755-778.	1.0	3
97	A land clearing index for high-frequency unsupervised monitoring of land development using multi-source optical remote sensing images. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 187, 393-421.	4.9	2
98	Generating continuous fine-scale land cover mapping by edge-guided maximum a posteriori based spatiotemporal sub-pixel mapping. Science of Remote Sensing, 2022, 5, 100041.	2.2	1