Yu Liu

List of Publications by Year
in descending order

162 papers	9,948 citations	70961 41 h-index	38300 95 g-index
163 all docs	163 docs citations	163 times ranked	7212 citing authors

#	Article	IF	Citations
1	Assessing changes in job accessibility and commuting time under bike-sharing scenarios. Transportmetrica A: Transport Science, 2024, 20, .	1.3	3
2	Urban park accessibility and the mental health of older adults: a case study of Haidian District, Beijing. Leisure Studies, 2023, 42, 235-252.	1.2	3
3	MM-UrbanFAC: Urban Functional Area Classification Model Based on Multimodal Machine Learning. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 8488-8497.	4.7	4
4	Calculating Theme Parks' Tourism Demand and Attractiveness Energy: A Reverse Gravity Model and Particle Swarm Optimization. Journal of Travel Research, 2022, 61, 314-330.	5.8	11
5	Wayfinding Behavior and Spatial Knowledge Acquisition: Are They the Same in Virtual Reality and in Real-World Environments?. Annals of the American Association of Geographers, 2022, 112, 226-246.	1.5	12
6	Core or edge? Revisiting GIScience from the geography-discipline perspective. Science China Earth Sciences, 2022, 65, 387-390.	2.3	5
7	Measuring hub locations in time-evolving spatial interaction networks based on explicit spatiotemporal coupling and group centrality. International Journal of Geographical Information Science, 2022, 36, 360-381.	2.2	7
8	Spatial regression graph convolutional neural networks: A deep learning paradigm for spatial multivariate distributions. GeoInformatica, 2022, 26, 645-676.	2.0	12
9	Applying Ollivier-Ricci curvature to indicate the mismatch of travel demand and supply in urban transit network. International Journal of Applied Earth Observation and Geoinformation, 2022, 106, 102666.	1.4	3
10	Measuring urban sentiments from social media data: a dual-polarity metric approach. Journal of Geographical Systems, 2022, 24, 199-221.	1.9	9
11	Quantifying the shape of urban street trees and evaluating its influence on their aesthetic functions based on mobile lidar data. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 184, 203-214.	4.9	31
12	Curvature graph neural network. Information Sciences, 2022, 592, 50-66.	4.0	27
13	Equity in Health-Seeking Behavior of Groups Using Different Transportations. International Journal of Environmental Research and Public Health, 2022, 19, 2765.	1.2	1
14	Understanding China's urban system evolution from web search index data. EPJ Data Science, 2022, 11, 20.	1.5	5
15	A social sensing approach for everyday urban problem-handling with the 12345-complaint hotline data. Computers, Environment and Urban Systems, 2022, 94, 101790.	3.3	10
16	Understanding taxi ridership with spatial spillover effects and temporal dynamics. Cities, 2022, 125, 103637.	2.7	11
17	A spatial interaction incorporated betweenness centrality measure. PLoS ONE, 2022, 17, e0268203.	1.1	6
18	Spatio-temporal constrained origin-destination inferring using public transit fare card data. Physica A: Statistical Mechanics and Its Applications, 2022, , 127642.	1.2	3

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19	Flow trace: A novel representation of intra-urban movement dynamics. Computers, Environment and Urban Systems, 2022, 96, 101832.	3.3	7
20	A method to evaluate task-specific importance of spatio-temporal units based on explainable artificial intelligence. International Journal of Geographical Information Science, 2021, 35, 2002-2025.	2.2	15
21	Spatial Origin-Destination Flow Imputation Using Graph Convolutional Networks. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 7474-7484.	4.7	36
22	Urban function recognition by integrating social media and street-level imagery. Environment and Planning B: Urban Analytics and City Science, 2021, 48, 1430-1444.	1.0	33
23	A BiLSTM-CNN model for predicting users' next locations based on geotagged social media. International Journal of Geographical Information Science, 2021, 35, 639-660.	2.2	26
24	User-Generated Content: A Promising Data Source for Urban Informatics. Urban Book Series, 2021, , 503-522.	0.3	6
25	A gridded establishment dataset as a proxy for economic activity in China. Scientific Data, 2021, 8, 5.	2.4	14
26	An SOE-Based Learning Framework Using Multisource Big Data for Identifying Urban Functional Zones. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 7336-7348.	2.3	26
27	Evaluating healthcare resource inequality in Beijing, China based on an improved spatial accessibility measurement. Transactions in GIS, 2021, 25, 1504-1521.	1.0	40
28	Mapping relationships between mobile phone call activity and regional function using self-organizing map. Computers, Environment and Urban Systems, 2021, 87, 101624.	3.3	6
29	Identifying borders of activity spaces and quantifying border effects on intra-urban travel through spatial interaction network. Computers, Environment and Urban Systems, 2021, 87, 101625.	3.3	9
30	Culture vs. distance: comparing the effects of geographic segmentation variables on tourists' destination images based on social media data. Computational Urban Science, 2021, 1, 1.	1.9	5
31	Multi-scale detection and interpretation of spatio-temporal anomalies of human activities represented by time-series. Computers, Environment and Urban Systems, 2021, 88, 101627.	3.3	14
32	GIScience and remote sensing in natural resource and environmental research: Status quo and future perspectives. Geography and Sustainability, 2021, 2, 207-215.	1.9	13
33	Detecting statistically significant geographical anomalous regions from spatial sampling points by coupling Gaussian function and multidirectional optimization. Transactions in GIS, 2021, 25, 1277-1300.	1.0	0
34	A framework for mixed-use decomposition based on temporal activity signatures extracted from big geo-data. International Journal of Digital Earth, 2020, 13, 708-726.	1.6	39
35	Examining the effect of land-use function complementarity on intra-urban spatial interactions using metro smart card records. Transportation, 2020, 47, 1607-1629.	2.1	21
36	Spatial interpolation using conditional generative adversarial neural networks. International Journal of Geographical Information Science, 2020, 34, 735-758.	2.2	86

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37	The Missing Parts from Social Media–Enabled Smart Cities: Who, Where, When, and What?. Annals of the American Association of Geographers, 2020, 110, 462-475.	1.5	43
38	T-GCN: A Temporal Graph Convolutional Network for Traffic Prediction. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3848-3858.	4.7	1,257
39	Comparing the roles of landmark visual salience and semantic salience in visual guidance during indoor wayfinding. Cartography and Geographic Information Science, 2020, 47, 229-243.	1.4	29
40	An Ensemble Learning Approach for Urban Land Use Mapping Based on Remote Sensing Imagery and Social Sensing Data. Remote Sensing, 2020, 12, 3254.	1.8	36
41	A review of urban physical environment sensing using street view imagery in public health studies. Annals of GIS, 2020, 26, 261-275.	1.4	116
42	Mapping Human Activity Volumes Through Remote Sensing Imagery. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 5652-5668.	2.3	23
43	Understanding the mesoscopic scaling patterns within cities. Scientific Reports, 2020, 10, 21201.	1.6	29
44	Identifying Urban Residents' Activity Space at Multiple Geographic Scales Using Mobile Phone Data. ISPRS International Journal of Geo-Information, 2020, 9, 241.	1.4	17
45	Comparing pedestrians' gaze behavior in desktop and in real environments. Cartography and Geographic Information Science, 2020, 47, 432-451.	1.4	15
46	A unified spatial multigraph analysis for public transport performance. Scientific Reports, 2020, 10, 9573.	1.6	3
47	Quantifying urban areas with multi-source data based on percolation theory. Remote Sensing of Environment, 2020, 241, 111730.	4.6	40
48	How urban places are visited by social groups? Evidence from matrix factorization on mobile phone data. Transactions in GIS, 2020, 24, 1504-1525.	1.0	10
49	Understanding Place Characteristics in Geographic Contexts through Graph Convolutional Neural Networks. Annals of the American Association of Geographers, 2020, 110, 408-420.	1.5	68
50	Access to hospitals: Potential vs. observed. Cities, 2020, 100, 102671.	2.7	53
51	Application of deep learning in ecological resource research: Theories, methods, and challenges. Science China Earth Sciences, 2020, 63, 1457-1474.	2.3	53
52	Mapping Water Quality Parameters in Urban Rivers from Hyperspectral Images Using a New Self-Adapting Selection of Multiple Artificial Neural Networks. Remote Sensing, 2020, 12, 336.	1.8	30
53	Building a model-based personalised recommendation approach for tourist attractions from geotagged social media data. International Journal of Digital Earth, 2019, 12, 661-678.	1.6	37
54	Inferring demographics from human trajectories and geographical context. Computers, Environment and Urban Systems, 2019, 77, 101368.	3.3	39

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55	Modeling the Vagueness of Areal Geographic Objects: A Categorization System. ISPRS International Journal of Geo-Information, 2019, 8, 306.	1.4	11
56	An extended exploration and preferential return model for human mobility simulation at individual and collective levels. Physica A: Statistical Mechanics and Its Applications, 2019, 534, 121921.	1.2	12
57	Extracting Spatial Patterns of Intercity Tourist Movements from Online Travel Blogs. Sustainability, 2019, 11, 3526.	1.6	15
58	Quantifying the scale effect in geospatial big data using semi-variograms. PLoS ONE, 2019, 14, e0225139.	1.1	26
59	A Spatiotemporal Constraint Non-Negative Matrix Factorization Model to Discover Intra-Urban Mobility Patterns from Taxi Trips. Sustainability, 2019, 11, 4214.	1.6	11
60	Measuring spatio-temporal autocorrelation in time series data of collective human mobility. Geo-Spatial Information Science, 2019, 22, 166-173.	2.4	31
61	A fuzzy formal concept analysis-based approach to uncovering spatial hierarchies among vague places extracted from user-generated data. International Journal of Geographical Information Science, 2019, 33, 991-1016.	2.2	22
62	Extracting human emotions at different places based on facial expressions and spatial clustering analysis. Transactions in GIS, 2019, 23, 450-480.	1.0	53
63	Measuring road network topology vulnerability by Ricci curvature. Physica A: Statistical Mechanics and Its Applications, 2019, 527, 121071.	1.2	31
64	Social sensing from street-level imagery: A case study in learning spatio-temporal urban mobility patterns. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 153, 48-58.	4.9	114
65	Deep learning in remote sensing applications: A meta-analysis and review. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 152, 166-177.	4.9	1,243
66	Migration patterns in China extracted from mobile positioning data. Habitat International, 2019, 86, 71-80.	2.3	38
67	Discovering place-informative scenes and objects using social media photos. Royal Society Open Science, 2019, 6, 181375.	1.1	34
68	Evaluating the Spatial Accessibility and Distribution Balance of Multi-Level Medical Service Facilities. International Journal of Environmental Research and Public Health, 2019, 16, 1150.	1.2	56
69	Optimizing the spatial relocation of hospitals to reduce urban traffic congestion: A case study of Beijing. Transactions in GIS, 2019, 23, 365-386.	1.0	16
70	Visualizing spatial interaction characteristics with direction-based pattern maps. Journal of Visualization, 2019, 22, 555-569.	1.1	13
71	Delineating urbanization â€œsource-sinkâ€•regions in China: Evidence from mobile app data. Cities, 2019, 86, 167-177.	2.7	21
72	Impacts of climate change and irrigation on lakes in arid northwest China. Journal of Arid Environments, 2018, 154, 34-39.	1.2	44

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73	Inferring spatial interaction patterns from sequential snapshots of spatial distributions. International Journal of Geographical Information Science, 2018, 32, 783-805.	2.2	45
74	Automatic Recognition of Pole-Like Objects from Mobile Laser Scanning Point Clouds. Remote Sensing, 2018, 10, 1891.	1.8	18
75	The Scale Effect on Spatial Interaction Patterns: An Empirical Study Using Taxi O-D data of Beijing and Shanghai. IEEE Access, 2018, 6, 51994-52003.	2.6	16
76	Introduction to the Special Issue: â€œState-of-the-Art Virtual/Augmented Reality and 3D Modeling Techniques for Virtual Urban Geographic Experimentsâ€• ISPRS International Journal of Geo-Information, 2018, 7, 366.	1.4	0
77	A Stepwise Spatio-Temporal Flow Clustering Method for Discovering Mobility Trends. IEEE Access, 2018, 6, 44666-44675.	2.6	30
78	Measuring human perceptions of a large-scale urban region using machine learning. Landscape and Urban Planning, 2018, 180, 148-160.	3.4	325
79	Real-Time Location-Based Rendering of Urban Underground Pipelines. ISPRS International Journal of Geo-Information, 2018, 7, 32.	1.4	15
80	Fine-grained analysis on fuel-consumption and emission from vehicles trace. Journal of Cleaner Production, 2018, 203, 340-352.	4.6	35
81	Building a Spatially-Embedded Network of Tourism Hotspots From Geotagged Social Media Data. IEEE Access, 2018, 6, 21945-21955.	2.6	31
82	Comparing Social Media Data and Survey Data in Assessing the Attractiveness of Beijing Olympic Forest Park. Sustainability, 2018, 10, 382.	1.6	37
83	HiSpatialCluster: A novel highâ€performance software tool for clustering massive spatial points. Transactions in GIS, 2018, 22, 1275-1298.	1.0	10
84	Understanding the interplay between bus, metro, and cab ridership dynamics in Shenzhen, China. Transactions in GIS, 2018, 22, 855-871.	1.0	19
85	Representing place locales using scene elements. Computers, Environment and Urban Systems, 2018, 71, 153-164.	3.3	91
86	THE IMPACTS OF ARTIFICIAL INTELLIGENCE ON DESIGN. Landscape Architecture Frontiers, 2018, 6, 52.	0.4	0
87	Social Media: New Perspectives to Improve Remote Sensing for Emergency Response. Proceedings of the IEEE, 2017, 105, 1900-1912.	16.4	45
88	Street as a big geo-data assembly and analysis unit in urban studies: A case study using Beijing taxi data. Applied Geography, 2017, 86, 152-164.	1.7	74
89	Difference of urban development in China from the perspective of passenger transport around Spring Festival. Applied Geography, 2017, 87, 85-96.	1.7	89
90	Exploring inter-country connection in mass media: A case study of China. Computers, Environment and Urban Systems, 2017, 62, 86-96.	3.3	17

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91	Understanding the effects of administrative boundary in sampling spatially embedded networks. Physica A: Statistical Mechanics and Its Applications, 2017, 466, 616-625.	1.2	2
92	Investigating Public Facility Characteristics from a Spatial Interaction Perspective: A Case Study of Beijing Hospitals Using Taxi Data. ISPRS International Journal of Geo-Information, 2017, 6, 38.	1.4	54
93	Quantifying Tourist Behavior Patterns by Travel Motifs and Geo-Tagged Photos from Flickr. ISPRS International Journal of Geo-Information, 2017, 6, 345.	1.4	50
94	A Density-Based Clustering Method for Urban Scene Mobile Laser Scanning Data Segmentation. Remote Sensing, 2017, 9, 331.	1.8	21
95	The promises of big data and small data for travel behavior (aka human mobility) analysis. Transportation Research Part C: Emerging Technologies, 2016, 68, 285-299.	3.9	383
96	Geographical impacts on social networks from perspectives of space and place: an empirical study using mobile phone data. Journal of Geographical Systems, 2016, 18, 359-376.	1.9	23
97	Latent spatio-temporal activity structures: a new approach to inferring intra-urban functional regions via social media check-in data. Geo-Spatial Information Science, 2016, 19, 94-105.	2.4	48
98	Uncovering regional characteristics from mobile phone data: A network science approach. Papers in Regional Science, 2016, 95, 613-631.	1.0	27
99	Inferring trip purposes and uncovering travel patterns from taxi trajectory data. Cartography and Geographic Information Science, 2016, 43, 103-114.	1.4	173
100	Incorporating spatial interaction patterns in classifying and understanding urban land use. International Journal of Geographical Information Science, 2016, 30, 334-350.	2.2	121
101	A Generalized Radiation Model for Human Mobility: Spatial Scale, Searching Direction and Trip Constraint. PLoS ONE, 2015, 10, e0143500.	1.1	53
102	Human mobility patterns in different communities: a mobile phone data-based social network approach. Annals of GIS, 2015, 21, 15-26.	1.4	44
103	Delineating intra-urban spatial connectivity patterns by travel-activities: A case study of Beijing, China. , 2015, , .		6
104	Revealing travel patterns and city structure with taxi trip data. Journal of Transport Geography, 2015, 43, 78-90.	2.3	325
105	Linked Activity Spaces: Embedding Social Networks in Urban Space. , 2015, , 313-336.		20
106	Social Sensing: A New Approach to Understanding Our Socioeconomic Environments. Annals of the American Association of Geographers, 2015, 105, 512-530.	3.0	557
107	Everyday space–time geographies: using mobile phone-based sensor data to monitor urban activity in Harbin, Paris, and Tallinn. International Journal of Geographical Information Science, 2015, 29, 2017-2039.	2.2	123
108	Measuring Spatial Autocorrelation of Vectors. Geographical Analysis, 2015, 47, 300-319.	1.9	48

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109	Uncovering Patterns of Inter-Urban Trip and Spatial Interaction from Social Media Check-In Data. PLoS ONE, 2014, 9, e86026.	1.1	249
110	Intra-Urban Human Mobility and Activity Transition: Evidence from Social Media Check-In Data. PLoS ONE, 2014, 9, e97010.	1.1	170
111	Analyzing Relatedness by Toponym Coâ€‹O‹ccurrences on Web Pages. Transactions in GIS, 2014, 18, 89-107.	1.0	64
112	Terrestrial surface-area increment: the effects of topography, DEM resolution, and algorithm. Physical Geography, 2014, 35, 297-312.	0.6	6
113	Reconstructing Gravitational Attractions of Major Cities in China from Air Passenger Flow Data, 2001â€"2008: A Particle Swarm Optimization Approach. Professional Geographer, 2013, 65, 265-282.	1.0	45
114	Discovering Spatial Interaction Communities from Mobile Phone D‹ata. Transactions in GIS, 2013, 17, 463-481.	1.0	203
115	Understanding Urban Traffic-Flow Characteristics: A Rethinking of Betweenness Centrality. Environment and Planning B: Planning and Design, 2013, 40, 135-153.	1.7	139
116	Exploring human movements in Singapore. , 2013, , .		61
117	Transit Network Optimization for Feeder Bus of BRT Based on Genetic Algorithm. , 2013, , .		2
118	Inferring properties and revealing geographical impacts of intercity mobile communication network of China using a subnet data set. International Journal of Geographical Information Science, 2013, 27, 431-448.	2.2	38
119	Understanding intra-urban trip patterns from taxi trajectory data. Journal of Geographical Systems, 2012, 14, 463-483.	1.9	273
120	Intra-urban human mobility patterns: An urban morphology perspective. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 1702-1717.	1.2	181
121	An object-based analysis filtering algorithm for airborne laser scanning. International Journal of Remote Sensing, 2012, 33, 7099-7116.	1.3	29
122	Towards Estimating Urban Population Distributions from Mobile Call Data. Journal of Urban Technology, 2012, 19, 3-21.	2.5	113
123	Urban land uses and traffic â€˜source-sink areasâ€™: Evidence from GPS-enabled taxi data in Shanghai. Landscape and Urban Planning, 2012, 106, 73-87.	3.4	344
124	A vector-based algorithm to generate and update multiplicatively weighted Voronoi diagrams for points, polylines, and polygons. Computers and Geosciences, 2012, 42, 118-125.	2.0	17
125	A software framework for classification models of geographical data. Computers and Geosciences, 2012, 42, 47-56.	2.0	14
126	Correlating mobile phone usage and travel behavior â€“ A case study of Harbin, China. Computers, Environment and Urban Systems, 2012, 36, 118-130.	3.3	191

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127	Pervasive location acquisition technologies: Opportunities and challenges for geospatial studies. Computers, Environment and Urban Systems, 2012, 36, 105-108.	3.3	79
128	Probability issues in locality descriptions based on Voronoi neighbor relationship. Journal of Visual Languages and Computing, 2012, 23, 213-222.	1.8	7
129	Georeferencing Incidents from Locality Descriptions and its Applications: a Case Study from Yosemite National Park Search and Rescue. Transactions in GIS, 2011, 15, 775-793.	1.0	10
130	Positioning localities from spatial assertions based on Voronoi neighboring. Science China Technological Sciences, 2010, 53, 143-149.	2.0	4
131	A semantic geographical knowledge wiki system mashed up with Google Maps. Science China Technological Sciences, 2010, 53, 52-60.	2.0	12
132	A point-set-based approximation for areal objects: A case study of representing localities. Computers, Environment and Urban Systems, 2010, 34, 28-39.	3.3	19
133	ModEco: an integrated software package for ecological niche modeling. Ecography, 2010, 33, 637-642.	2.1	95
134	Human impact index in landslide susceptibility mapping. , 2010, , .		3
135	Analyzing and geo-visualizing individual human mobility patterns using mobile call records. , 2010, , .		42
136	Structural hierarchy of spatial knowledge based on landmarks and its application in locality descriptions. , 2010, , .		4
137	Individual activity data collection based on mobile positioning infrastructure in Beijing. , 2010, , .		1
138	An evidence-based approach for Toponym Disambiguation. , 2010, , .		10
139	Morphometric characterisation of landform from DEMs. International Journal of Geographical Information Science, 2010, 24, 305-326.	2.2	38
140	KIDGS: A geographical knowledge-informed digital gazetteer service. , 2009, , .		3
141	Boolean Operations on Conic Polygons. Journal of Computer Science and Technology, 2009, 24, 568-577.	0.9	6
142	On geo-social network services. , 2009, , .		4
143	Spatial distribution of the inlinks to the Beijing tourist attractions' websites. , 2009, , .		1
144	Extracting the international markets of a tourist destination from inlinks. , 2009, , .		0

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145	The accuracy assessment in areal interpolation: An empirical investigation. Science in China Series D: Earth Sciences, 2008, 51, 62-71.	0.9	2
146	Probabilistic composition of cone-based cardinal direction relations. Science in China Series D: Earth Sciences, 2008, 51, 81-90.	0.9	2
147	Effects of raster resolution on landslide susceptibility mapping: A case study of Shenzhen. Science in China Series D: Earth Sciences, 2008, 51, 188-198.	0.9	44
148	A static and dynamic factors-coupled forecasting model of regional rainfall-induced landslides: A case study of Shenzhen. Science in China Series D: Earth Sciences, 2008, 51, 164-175.	0.9	23
149	A framework of region-based spatial relations for non-overlapping features and its application in object based image analysis. ISPRS Journal of Photogrammetry and Remote Sensing, 2008, 63, 461-475.	4.9	50
150	GNet: A generalized network model and its applications in qualitative spatial reasoning. Information Sciences, 2008, 178, 2163-2175.	4.0	6
151	Cognitive distortions based on MDS configuration and sketch mapping: a case study in Beijing. Proceedings of SPIE, 2007, , .	0.8	1
152	Study of Cultural Impacts on Location Judgments in Eastern China. , 2007, , 20-31.		8
153	A spatial reference frame model of Beijing based on spatial cognitive experiment. , 2006, 6418, 409.		2
154	The semantic analysis about the spatial orientation expression of GIS in Chinese case study of Beijing. , 2006, , .		0
155	On Internal Cardinal Direction Relations. Lecture Notes in Computer Science, 2005, , 283-299.	1.0	21
156	Using contour lines to generate digital elevation models for steep slope areas: a case study of the Loess Plateau in North China. Catena, 2003, 54, 161-171.	2.2	18
157	GSQL-R: a query language supporting raster data. , 0, , .		2
158	Path reconstruction based on natural language and the uncertainty problems. , 0, , .		0
159	A Quantitative Damage Identification Method for CF/EP Composite Laminates Based on Lamb Waves. Applied Mechanics and Materials, 0, 83, 13-18.	0.2	2
160	Integrating multi-source big data to infer building functions. International Journal of Geographical Information Science, 0, , 1-20.	2.2	44
161	Space-Time Behavior Survey for Smart Travel Planning in Beijing, China. Advances in Data Mining and Database Management Book Series, 0, , 79-90.	0.4	8
162	Intercity Population Migration Conditioned by City Industry Structures. Annals of the American Association of Geographers, 0, , 1-20.	1.5	8