

Matt Duckham

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

79
papers

1,819
citations

19
h-index

41
g-index

96
ext. papers

2,081
ext. citations

2.7
avg, IF

4.96
L-index

#	Paper	IF	Citations
79	A Formal Model of Obfuscation and Negotiation for Location Privacy. <i>Lecture Notes in Computer Science</i> , 2005 , 152-170	0.9	286
78	GIS		192
77	Efficient generation of simple polygons for characterizing the shape of a set of points in the plane. <i>Pattern Recognition</i> , 2008 , 41, 3224-3236	7.7	147
76	Including landmarks in routing instructions. <i>Journal of Location Based Services</i> , 2010 , 4, 28-52	1.9	112
75	A formal approach to imperfection in geographic information. <i>Computers, Environment and Urban Systems</i> , 2001 , 25, 89-103	5.9	81
74	Monitoring qualitative spatiotemporal change for geosensor networks. <i>International Journal of Geographical Information Science</i> , 2006 , 20, 1087-1108	4.1	78
73	SimplestPaths: Automated Route Selection for Navigation. <i>Lecture Notes in Computer Science</i> , 2003 , 169-185	0.9	74
72	Trajectory similarity measures. <i>SIGSPATIAL Special</i> , 2015 , 7, 43-50	2.3	73
71	An algebraic approach to automated geospatial information fusion. <i>International Journal of Geographical Information Science</i> , 2005 , 19, 537-557	4.1	46
70	Evaluating the impact of visualization of wildfire hazard upon decision-making under uncertainty. <i>International Journal of Geographical Information Science</i> , 2016 , 30, 1377-1404	4.1	42
69	What Is the Region Occupied by a Set of Points?. <i>Lecture Notes in Computer Science</i> , 2006 , 81-98	0.9	42
68	Simulation of Obfuscation and Negotiation for Location Privacy. <i>Lecture Notes in Computer Science</i> , 2005 , 31-48	0.9	40
67	Ontology-driven map generalization. <i>Journal of Visual Languages and Computing</i> , 2005 , 16, 245-267		39
66	Simplest Instructions: Finding Easy-to-Describe Routes for Navigation. <i>Lecture Notes in Computer Science</i> , 2008 , 274-289	0.9	33
65	Qualitative reasoning about consistency in geographic information. <i>Information Sciences</i> , 2006 , 176, 601-627	6.7	29
64	Identifying factors of geographic event conceptualisation. <i>International Journal of Geographical Information Science</i> , 2008 , 22, 183-204	4.1	27
63	Monitoring dynamic spatial fields using responsive geosensor networks 2005 ,		27

62	Decentralized and coordinate-free computation of critical points and surface networks in a discretized scalar field. <i>International Journal of Geographical Information Science</i> , 2014 , 28, 1-21	4.1	25
61	Mining candidate causal relationships in movement patterns. <i>International Journal of Geographical Information Science</i> , 2014 , 28, 363-382	4.1	20
60	Decentralized Spatial Computing 2013 ,		19
59	Stream Kriging: Incremental and recursive ordinary Kriging over spatiotemporal data streams. <i>Computers and Geosciences</i> , 2016 , 90, 134-143	4.5	19
58	Imprecise Navigation. <i>GeoInformatica</i> , 2003 , 7, 79-94	2.5	18
57	Real-time estimation of wildfire perimeters from curated crowdsourcing. <i>Scientific Reports</i> , 2016 , 6, 24206		18
56	Decentralized Monitoring of Moving Objects in a Transportation Network Augmented with Checkpoints. <i>Computer Journal</i> , 2013 , 56, 1432-1449	1.3	17
55	Commonsense Notions of Proximity and Direction in Environmental Space. <i>Spatial Cognition and Computation</i> , 2004 , 4, 285-312	1.3	14
54	Advancing the ethical use of digital data in human research: challenges and strategies to promote ethical practice. <i>Ethics and Information Technology</i> , 2019 , 21, 59-73	3.7	14
53	Decentralized Movement Pattern Detection amongst Mobile Geosensor Nodes. <i>Lecture Notes in Computer Science</i> , 2008 , 199-216	0.9	13
52	A Spatiotemporal Model of Strategies and Counter Strategies for Location Privacy Protection. <i>Lecture Notes in Computer Science</i> , 2006 , 47-64	0.9	13
51	Assessment of error in digital vector data using fractal geometry. <i>International Journal of Geographical Information Science</i> , 2000 , 14, 67-84	4.1	12
50	A framework for models of movement in geographic space. <i>International Journal of Geographical Information Science</i> , 2016 , 30, 970-992	4.1	11
49	On redundant topological constraints. <i>Artificial Intelligence</i> , 2015 , 225, 51-76	3.6	11
48	Deferred decentralized movement pattern mining for geosensor networks. <i>International Journal of Geographical Information Science</i> , 2011 , 25, 273-292	4.1	11
47	Integrating Spatio-thematic Information. <i>Lecture Notes in Computer Science</i> , 2002 , 346-361	0.9	11
46	Computational structure in three-valued nearness relations. <i>Lecture Notes in Computer Science</i> , 2001 , 76-91	0.9	10
45	Solar radiation modeling with KNIME and Solar Analyst: Increasing environmental model reproducibility using scientific workflows. <i>Environmental Modelling and Software</i> , 2020 , 132, 104780	5.2	10

44	Characterizing the shapes of noisy, non-uniform, and disconnected point clusters in the plane. <i>Computers, Environment and Urban Systems</i> , 2016 , 57, 48-58	5.9	9
43	Efficient, Decentralized Computation of the Topology of Spatial Regions. <i>IEEE Transactions on Computers</i> , 2011 , 60, 1100-1113	2.5	9
42	Analytics of movement through checkpoints. <i>International Journal of Geographical Information Science</i> , 2018 , 32, 1282-1303	4.1	9
41	Spatio-temporal event detection using probabilistic graphical models (PGMs) 2013 ,		8
40	The Australian approach to geospatial capabilities; positioning, earth observation, infrastructure and analytics: issues, trends and perspectives. <i>Geo-Spatial Information Science</i> , 2017 , 20, 109-125	3.5	8
39	A User-Oriented Perspective of Error-sensitive GIS Development. <i>Transactions in GIS</i> , 2002 , 6, 179-193	2.1	8
38	Automated Geographical Information Fusion and Ontology Alignment 2007 , 109-132		7
37	Effect of Neighborhood on In-Network Processing in Sensor Networks. <i>Lecture Notes in Computer Science</i> , 2008 , 133-150	0.9	7
36	Decentralized Reasoning about Gradual Changes of Topological Relationships between Continuously Evolving Regions. <i>Lecture Notes in Computer Science</i> , 2011 , 126-147	0.9	7
35	GI Expertise. <i>Transactions in GIS</i> , 2015 , 19, 499-515	2.1	6
34	Decentralized Detection of Topological Events in Evolving Spatial Regions. <i>Computer Journal</i> , 2013 , 56, 1417-1431	1.3	6
33	Evaluating the impact of visualization of risk upon emergency route-planning. <i>International Journal of Geographical Information Science</i> , 2020 , 34, 1022-1050	4.1	6
32	Decentralized environmental simulation and feedback in robust geosensor networks. <i>Computers, Environment and Urban Systems</i> , 2009 , 33, 256-268	5.9	5
31	Decentralized detection and monitoring of convoy patterns. <i>International Journal of Geographical Information Science</i> , 2016 , 30, 993-1011	4.1	4
30	Indexing large geographic datasets with compact qualitative representation. <i>International Journal of Geographical Information Science</i> , 2016 , 30, 1072-1094	4.1	4
29	Spatio-Temporal Architecture-Based Framework for Testing Services in the Cloud 2015 ,		4
28	Qualitative Change to 3-Valued Regions. <i>Lecture Notes in Computer Science</i> , 2010 , 249-263	0.9	4
27	Challenges to using decentralized spatial algorithms in the field. <i>SIGSPATIAL Special</i> , 2015 , 7, 14-21	2.3	3

26	Decentralized querying of topological relations between regions monitored by a coordinate-free geosensor network. <i>GeoInformatica</i> , 2013 , 17, 669-696	2.5	3
25	Decentralized querying of topological relations between regions without using localization 2010 ,		3
24	Decentralized Spatial Computing in Urban Environments. <i>Geospatial Technology and the Role of Location in Science</i> , 2010 , 53-74	0.5	3
23	Bridging the geospatial gap: Data about space and indigenous knowledge of place. <i>Geography Compass</i> , 2020 , 14, e12542	2.4	3
22	A comparative analysis of trajectory similarity measures. <i>GIScience and Remote Sensing</i> , 2021 , 58, 643-662	1.8	3
21	Qualitative-geometric Surrounds-Relations between disjoint regions. <i>International Journal of Geographical Information Science</i> , 2021 , 35, 1032-1063	4.1	3
20	Improving the reproducibility of geospatial scientific workflows: the use of geosocial media in facilitating disaster response. <i>Journal of Spatial Science</i> , 2019 , 1-18	1.6	2
19	Spatial Interpolation of Streaming Geosensor Network Data in the RISER System. <i>Lecture Notes in Computer Science</i> , 2015 , 161-177	0.9	2
18	Spatiotemporal Braitenberg vehicles 2013 ,		2
17	Qualitative Spatial Structure in Complex Areal Objects Using Location-Free, Mobile Geosensor Networks 2013 ,		2
16	Decentralized area computation for spatial regions 2009 ,		2
15	Object Calculus and the Object-Oriented Analysis and Design of an Error-Sensitive GIS. <i>GeoInformatica</i> , 2001 , 5, 261-289	2.5	2
14	Identifying Surrounds and Engulfs Relations in Mobile and Coordinate-Free Geosensor Networks. <i>ACM Transactions on Spatial Algorithms and Systems</i> , 2018 , 4, 1-21	1.8	2
13	Modeling Checkpoint-Based Movement with the Earth Mover's Distance. <i>Lecture Notes in Computer Science</i> , 2016 , 225-239	0.9	2
12	Extracting Causal Rules from Spatio-Temporal Data. <i>Lecture Notes in Computer Science</i> , 2015 , 23-43	0.9	2
11	A coordinate-free, decentralized algorithm for monitoring events occurring to peaks in a dynamic scalar field 2013 ,		1
10	An efficient incremental algorithm for generating the characteristic shape of a dynamic set of points in the plane. <i>International Journal of Geographical Information Science</i> , 2017 , 31, 569-590	4.1	1
9	Integrated Storage and Querying of Spatially Varying Data Quality Information in a Relational Spatial Database. <i>Transactions in GIS</i> , 2009 , 13, 25-42	2.1	1

8	Efficient navigation for privacy-aware personal navigation services: Preliminary analysis 2011 ,		1
7	Geographic event conceptualization. <i>Cognitive Processing</i> , 2006 , 7, 52-54	1.5	1
6	Spatial data quality capture through inductive learning. <i>Spatial Cognition and Computation</i> , 2000 , 2, 261-282	1.8	1
5	Location Privacy 2009 , 254-259		1
4	Graphical Aids to the Estimation and Discrimination of Uncertain Numerical Data. <i>PLoS ONE</i> , 2015 , 10, e0141271	3.7	0
3	Efficient, Decentralized Detection of Qualitative Spatial Events in a Dynamic Scalar Field. <i>Sensors</i> , 2015 , 15, 21350-76	3.8	
2	AOI-shapes: An Efficient Footprint Algorithm to Support Visualization of User-defined Urban Areas of Interest. <i>ACM Transactions on Interactive Intelligent Systems</i> , 2021 , 11, 1-32	1.8	
1	Towards Indoor Navigation Under Imprecision. <i>Lecture Notes in Computer Science</i> , 2022 , 82-92	0.9	