

Stefan Leyk

List of Publications by Year in descending order

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Version: 2024-02-01

84
papers

1,972
citations

279798

23
h-index

289244

40
g-index

92
all docs

92
docs citations

92
times ranked

1960
citing authors

#	ARTICLE	IF	CITATIONS
1	The spatial allocation of population: a review of large-scale gridded population data products and their fitness for use. <i>Earth System Science Data</i> , 2019, 11, 1385-1409.	9.9	189
2	Increasing phenological asynchrony between spring green-up and arrival of migratory birds. <i>Scientific Reports</i> , 2017, 7, 1902.	3.3	143
3	A Survey of Digital Map Processing Techniques. <i>ACM Computing Surveys</i> , 2014, 47, 1-44.	23.0	93
4	A Conceptual Framework for Uncertainty Investigation in Map-based Land Cover Change Modelling. <i>Transactions in GIS</i> , 2005, 9, 291-322.	2.3	80
5	Dasymetric Modeling and Uncertainty. <i>Annals of the American Association of Geographers</i> , 2014, 104, 80-95.	3.0	75
6	Assessing the accuracy of multi-temporal built-up land layers across rural-urban trajectories in the United States. <i>Remote Sensing of Environment</i> , 2018, 204, 898-917.	11.0	74
7	Rural Outmigration, Natural Capital, and Livelihoods in South Africa. <i>Population, Space and Place</i> , 2014, 20, 402-420.	2.3	60
8	Two centuries of settlement and urban development in the United States. <i>Science Advances</i> , 2020, 6, eaba2937.	10.3	60
9	Saliency and semantic processing: Extracting forest cover from historical topographic maps. <i>Pattern Recognition</i> , 2006, 39, 953-968.	8.1	56
10	In the Line of Fire: Consequences of Human-Ignited Wildfires to Homes in the U.S. (1992-2015). <i>Fire</i> , 2020, 3, 50.	2.8	55
11	Colors of the past: color image segmentation in historical topographic maps based on homogeneity. <i>Geoinformatica</i> , 2010, 14, 1-21.	2.7	49
12	The tree cover and temperature disparity in US urbanized areas: Quantifying the association with income across 5,723 communities. <i>PLoS ONE</i> , 2021, 16, e0249715.	2.5	47
13	HISDAC-US, historical settlement data compilation for the conterminous United States over 200 years. <i>Scientific Data</i> , 2018, 5, 180175.	5.3	47
14	Understanding urbanization: A study of census and satellite-derived urban classes in the United States, 1990-2010. <i>PLoS ONE</i> , 2018, 13, e0208487.	2.5	46
15	Risky Development: Increasing Exposure to Natural Hazards in the United States. <i>Earth's Future</i> , 2021, 9, e2020EF001795.	6.3	40
16	Map Archive Mining: Visual-Analytical Approaches to Explore Large Historical Map Collections. <i>ISPRS International Journal of Geo-Information</i> , 2018, 7, 148.	2.9	36
17	Modeling moulin distribution on Sermeq Avannarleq glacier using ASTER and WorldView imagery and fuzzy set theory. <i>Remote Sensing of Environment</i> , 2011, 115, 2292-2301.	11.0	35
18	Spatially and temporally varying associations between temporary outmigration and natural resource availability in resource-dependent rural communities in South Africa: A modeling framework. <i>Applied Geography</i> , 2012, 34, 559-568.	3.7	31

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19	Maximum Entropy Dasymeric Modeling for Demographic Small Area Estimation. <i>Geographical Analysis</i> , 2013, 45, 285-306.	3.5	30
20	Automated Extraction of Human Settlement Patterns From Historical Topographic Map Series Using Weakly Supervised Convolutional Neural Networks. <i>IEEE Access</i> , 2020, 8, 6978-6996.	4.2	30
21	Assessing the impact of graphical quality on automatic text recognition in digital maps. <i>Computers and Geosciences</i> , 2016, 93, 21-35.	4.2	26
22	Using Historical Maps in Scientific Studies. <i>Springer Briefs in Geography</i> , 2020, , .	0.2	26
23	Improving land change detection based on uncertain survey maps using fuzzy sets. <i>Landscape Ecology</i> , 2007, 22, 257-272.	4.2	25
24	Exploiting temporal information in parcel data to refine small area population estimates. <i>Computers, Environment and Urban Systems</i> , 2016, 58, 19-28.	7.1	25
25	Modeling residential developed land in rural areas: A size-restricted approach using parcel data. <i>Applied Geography</i> , 2014, 47, 33-45.	3.7	22
26	Spatial modeling of personalized exposure dynamics: the case of pesticide use in small-scale agricultural production landscapes of the developing world. <i>International Journal of Health Geographics</i> , 2009, 8, 17.	2.5	21
27	Comparing the effects of an NLCD-derived dasymmetric refinement on estimation accuracies for multiple areal interpolation methods. <i>GIScience and Remote Sensing</i> , 2015, 52, 158-178.	5.9	21
28	Extracting Human Settlement Footprint from Historical Topographic Map Series Using Context-Based Machine Learning. , 2017, , .		20
29	Spatialising uncertainty in image segmentation using weakly supervised convolutional neural networks: a case study from historical map processing. <i>IET Image Processing</i> , 2018, 12, 2084-2091.	2.5	20
30	The heterogeneity and change in the urban structure of metropolitan areas in the United States, 1990â€“2010. <i>Scientific Data</i> , 2019, 6, 321.	5.3	20
31	Automatic alignment of contemporary vector data and georeferenced historical maps using reinforcement learning. <i>International Journal of Geographical Information Science</i> , 2020, 34, 824-849.	4.8	20
32	Fine-grained, spatiotemporal datasets measuring 200 years of land development in the United States. <i>Earth System Science Data</i> , 2021, 13, 119-153.	9.9	20
33	Spatio-temporal patterns of diarrhoeal mortality in Mexico. <i>Epidemiology and Infection</i> , 2012, 140, 91-99.	2.1	19
34	Internal and International Mobility as Adaptation to Climatic Variability in Contemporary Mexico: Evidence from the Integration of Census and Satellite Data. <i>Population, Space and Place</i> , 2017, 23, e2047.	2.3	19
35	A century of decoupling size and structure of urban spaces in the United States. <i>Communications Earth & Environment</i> , 2021, 2, .	6.8	19
36	Robust assessment of spatial non-stationarity in model associations related to pediatric mortality due to diarrheal disease in Brazil. <i>Spatial and Spatio-temporal Epidemiology</i> , 2012, 3, 95-105.	1.7	18

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37	Establishing relationships between parcel data and land cover for demographic small area estimation. <i>Cartography and Geographic Information Science</i> , 2013, 40, 305-315.	3.0	18
38	Exploring the impact of dasymetric refinement on spatiotemporal small area estimates. <i>Cartography and Geographic Information Science</i> , 2015, 42, 449-459.	3.0	17
39	How Entrenched Is the Spatial Structure of Inequality in Cities? Evidence from the Integration of Census and Housing Data for Denver from 1940 to 2016. <i>Annals of the American Association of Geographers</i> , 2020, 110, 1022-1039.	2.2	17
40	Automatic alignment of geographic features in contemporary vector data and historical maps. , 2017, , .		17
41	Towards the automated large-scale reconstruction of past road networks from historical maps. <i>Computers, Environment and Urban Systems</i> , 2022, 94, 101794.	7.1	17
42	Road network evolution in the urban and rural United States since 1900. <i>Computers, Environment and Urban Systems</i> , 2022, 95, 101803.	7.1	17
43	Extracting Composite Cartographic Area Features in Low-Quality Maps. <i>Cartography and Geographic Information Science</i> , 2009, 36, 71-79.	3.0	16
44	Data-enriched interpolation for temporally consistent population compositions. <i>GIScience and Remote Sensing</i> , 2019, 56, 430-461.	5.9	16
45	Towards a novel backdating strategy for creating built-up land time series data using contemporary spatial constraints. <i>Remote Sensing of Environment</i> , 2020, 238, 111197.	11.0	16
46	Exposing the urban continuum: implications and cross-comparison from an interdisciplinary perspective. <i>International Journal of Digital Earth</i> , 2020, 13, 22-44.	3.9	15
47	Fires that matter: reconceptualizing fire risk to include interactions between humans and the natural environment. <i>Environmental Research Letters</i> , 2022, 17, 045014.	5.2	14
48	Temporal replication of the national land cover database using active machine learning. <i>GIScience and Remote Sensing</i> , 2016, 53, 759-777.	5.9	9
49	Enhancing areal interpolation frameworks through dasymetric refinement to create consistent population estimates across censuses. <i>International Journal of Geographical Information Science</i> , 2018, 32, 1948-1976.	4.8	9
50	Building Linked Spatio-Temporal Data from Vectorized Historical Maps. <i>Lecture Notes in Computer Science</i> , 2020, , 409-426.	1.3	9
51	Detection of mountain pine beetle-killed ponderosa pine in a heterogeneous landscape using high-resolution aerial imagery. <i>International Journal of Remote Sensing</i> , 2015, 36, 5353-5372.	2.9	8
52	Combining Remote-Sensing-Derived Data and Historical Maps for Long-Term Back-Casting of Urban Extents. <i>Remote Sensing</i> , 2021, 13, 3672.	4.0	8
53	Validation of spatially allocated small area estimates for 1880 Census demography. <i>Demographic Research</i> , 0, 29, 579-616.	3.0	8
54	Modeling Ambiguity in Census Microdata Allocations to Improve Demographic Small Area Estimates. <i>Transactions in GIS</i> , 2013, 17, 406-425.	2.3	7

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55	Extending the geographic extent of existing land cover data using active machine learning and covariate shift corrective sampling. <i>International Journal of Remote Sensing</i> , 2016, 37, 5213-5233.	2.9	7
56	An Automatic Approach for Generating Rich, Linked Geo-Metadata from Historical Map Images. , 2020, , .		7
57	Global Harmonization of Urbanization Measures: Proceed with Care. <i>Remote Sensing</i> , 2021, 13, 4973.	4.0	7
58	Understanding the Combined Impacts of Aggregation and Spatial Non-Stationarity: The Case of Migration-Environment Associations in Rural South Africa. <i>Transactions in GIS</i> , 2015, 19, 877-895.	2.3	6
59	Urban Change in the United States, 1990-2010: A Spatial Assessment of Administrative Reclassification. <i>Sustainability</i> , 2020, 12, 1649.	3.2	6
60	Training Deep Learning Models for Geographic Feature Recognition from Historical Maps. <i>Springer Briefs in Geography</i> , 2020, , 65-98.	0.2	6
61	A scale-sensitive framework for the spatially explicit accuracy assessment of binary built-up surface layers. <i>Remote Sensing of Environment</i> , 2022, 279, 113117.	11.0	6
62	Effects of varying temporal scale on spatial models of mortality patterns attributed to pediatric diarrhea. <i>Spatial and Spatio-temporal Epidemiology</i> , 2011, 2, 91-101.	1.7	5
63	Assessing effects of structural zeros on models of canine cancer incidence: a case study of the Swiss Canine Cancer Registry. <i>Geospatial Health</i> , 2017, 12, 539.	0.8	5
64	The importance of regional models in assessing canine cancer incidences in Switzerland. <i>PLoS ONE</i> , 2018, 13, e0195970.	2.5	5
65	Exploring Uncertainty in Canine Cancer Data Sources Through Dasymetric Refinement. <i>Frontiers in Veterinary Science</i> , 2019, 6, 45.	2.2	5
66	Looking Back, Looking Forward: Progress and Prospect for Spatial Demography. <i>Spatial Demography</i> , 2021, 9, 1-29.	0.9	5
67	MTBF-33: A multi-temporal building footprint dataset for 33 counties in the United States (1900 - 2015). <i>Data in Brief</i> , 2022, 43, 108369.	1.0	5
68	Fuzzy Modeling of Geometric Textures for Identifying Archipelagos in Area-Patch Generalization. <i>Cartography and Geographic Information Science</i> , 2011, 38, 137-145.	3.0	4
69	Recognition of group patterns in geological maps by building similarity networks. <i>Geocarto International</i> , 2022, 37, 607-626.	3.5	4
70	Historical Map Applications and Processing Technologies. <i>Springer Briefs in Geography</i> , 2020, , 9-36.	0.2	4
71	A framework for radiometric sensitivity evaluation of medium resolution remote sensing time series data to built-up land cover change. , 2017, , .		3
72	Change in U.S. Small Town Community Capitals, 1980-2010. <i>Population Research and Policy Review</i> , 2020, 39, 913-940.	2.2	3

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73	Creating Structured, Linked Geographic Data from Historical Maps: Challenges and Trends. Springer Briefs in Geography, 2020, , 37-63.	0.2	3
74	Geospatial Modeling Approaches to Historical Settlement and Landscape Analysis. ISPRS International Journal of Geo-Information, 2022, 11, 75.	2.9	3
75	Assessing Spatiotemporal Agreement between Multi-Temporal Built-up Land Layers and Integrated Cadastral and Building Data. International Conference on GIScience Short Paper Proceedings, 2016, 1, .	0.0	2
76	Urban Spatial Development in the United States from 1910 to 2010: A Novel Data-Driven Perspective. SSRN Electronic Journal, 0, , .	0.4	2
77	Deriving Small Area Mortality Estimates Using a Probabilistic Reweighting Method. Annals of the American Association of Geographers, 2017, 107, 1299-1314.	2.2	1
78	Estimating changes in urban land and urban population using refined areal interpolation techniques. Proceedings of the ICA, 0, 1, 1-5.	0.0	1
79	A Label Correction Algorithm Using Prior Information for Automatic and Accurate Geospatial Object Recognition. , 2021, , .		1
80	Assessing the uncertainty of non-change in national-scale vegetation mapping using 3D wavelet transformed NDVI time series. , 2013, , .		0
81	Reverse Engineering of Land Cover Data: Machine Learning for Data Replication in the Spatial and Temporal Domains. Geotechnologies and the Environment, 2018, , 3-22.	0.3	0
82	Supervised learning for automated feature selection in road network generalization. Abstracts of the ICA, 0, 3, 1-2.	0.0	0
83	Guided Generative Models using Weak Supervision for Detecting Object Spatial Arrangement in Overhead Images. , 2021, , .		0
84	Towards the large-scale extraction of historical land cover information from historical maps. Abstracts of the ICA, 0, 3, 1-2.	0.0	0