Benjamin Bechtel

List of Publications by Year
in descending order

83	5,394	136885 32	118793 62
papers	citations	h-index	g-index

100	100	100	4887
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	System for Automated Geoscientific Analyses (SAGA) v. 2.1.4. Geoscientific Model Development, 2015, 8, 1991-2007.	1.3	1,475
2	Mapping Local Climate Zones for a Worldwide Database of the Form and Function of Cities. ISPRS International Journal of Geo-Information, 2015, 4, 199-219.	1.4	429
3	WUDAPT: An Urban Weather, Climate, and Environmental Modeling Infrastructure for the Anthropocene. Bulletin of the American Meteorological Society, 2018, 99, 1907-1924.	1.7	254
4	Classification of Local Climate Zones Based on Multiple Earth Observation Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 1191-1202.	2.3	174
5	SUHI analysis using Local Climate Zonesâ€"A comparison of 50 cities. Urban Climate, 2019, 28, 100451.	2.4	163
6	WUDAPT, an efficient land use producing data tool for mesoscale models? Integration of urban LCZ in WRF over Madrid. Urban Climate, 2016, 17, 116-134.	2.4	161
7	Generating WUDAPT Level 0 data â€“ Current status of production and evaluation. Urban Climate, 2019, 27, 24-45.	2.4	148
8	Downscaling Land Surface Temperature in an Urban Area: A Case Study for Hamburg, Germany. Remote Sensing, 2012, 4, 3184-3200.	1.8	135
9	Comparison between convolutional neural networks and random forest for local climate zone classification in mega urban areas using Landsat images. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 157, 155-170.	4.9	126
10	Mapping Europe into local climate zones. PLoS ONE, 2019, 14, e0214474.	1.1	123
11	Open Data for Global Multimodal Land Use Classification: Outcome of the 2017 IEEE GRSS Data Fusion Contest. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 1363-1377.	2.3	104
12	Intra and inter â€˜local climate zoneâ€™ variability of air temperature as observed by crowdsourced citizen weather stations in Berlin, Germany. Meteorologische Zeitschrift, 2017, 26, 525-547.	0.5	101
13	A New Global Climatology of Annual Land Surface Temperature. Remote Sensing, 2015, 7, 2850-2870.	1.8	95
14	LCZ Generator: A Web Application to Create Local Climate Zone Maps. Frontiers in Environmental Science, 2021, 9, .	1.5	91
15	Detecting multi-temporal land cover change and land surface temperature in Pearl River Delta by adopting local climate zone. Urban Climate, 2019, 28, 100455.	2.4	84
16	Classification of Local Climate Zones Using SAR and Multispectral Data in an Arid Environment. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 3097-3105.	2.3	81
17	Identification of typical diurnal patterns for clear-sky climatology of surface urban heat islands. Remote Sensing of Environment, 2018, 217, 203-220.	4.6	80
18	Robustness of Annual Cycle Parameters to Characterize the Urban Thermal Landscapes. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 876-880.	1.4	78

#	Article	IF	Citations
19	Global transferability of local climate zone models. Urban Climate, 2019, 27, 46-63.	2.4	76
20	Quality of Crowdsourced Data on Urban Morphologyâ€"The Human Influence Experiment (HUMINEX). Urban Science, 2017, 1, 15.	1.1	67
21	Contributing to WUDAPT: A Local Climate Zone Classification of Two Cities in Ukraine. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 1841-1853.	2.3	65
22	Combining expert and crowd-sourced training data to map urban form and functions for the continental US. Scientific Data, 2020, 7, 264.	2.4	64
23	Local Climatic Zoning and Urban Heat Island in Beirut. Procedia Engineering, 2016, 169, 216-223.	1.2	50
24	Comparison between local climate zones maps derived from administrative datasets and satellite observations. Urban Climate, 2019, 27, 64-89.	2.4	49
25	Spatio-temporal variance and meteorological drivers of the urban heat island in a European city. Theoretical and Applied Climatology, 2017, 128, 43-61.	1.3	45
26	Balancing prediction accuracy and generalization ability: A hybrid framework for modelling the annual dynamics of satellite-derived land surface temperatures. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 151, 189-206.	4.9	45
27	Pathway using WUDAPT's Digital Synthetic City tool towards generating urban canopy parameters for multi-scale urban atmospheric modeling. Urban Climate, 2019, 28, 100459.	2.4	43
28	Multilevel Feature Fusion-Based CNN for Local Climate Zone Classification From Sentinel-2 Images: Benchmark Results on the So2Sat LCZ42 Dataset. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 2793-2806.	2.3	41
29	Linking urban climate classification with an urban energy and water budget model: Multi-site and multi-seasonal evaluation. Urban Climate, 2016, 17, 196-215.	2.4	37
30	Improving the Downscaling of Diurnal Land Surface Temperatures Using the Annual Cycle Parameters as Disaggregation Kernels. Remote Sensing, 2017, 9, 23.	1.8	37
31	Estimation of All-Weather 1 km MODIS Land Surface Temperature for Humid Summer Days. Remote Sensing, 2020, 12, 1398.	1.8	34
32	Meteorological controls on daily variations of nighttime surface urban heat islands. Remote Sensing of Environment, 2021, 253, 112198.	4.6	34
33	Assessing the Capability of a Downscaled Urban Land Surface Temperature Time Series to Reproduce the Spatiotemporal Features of the Original Data. Remote Sensing, 2016, 8, 274.	1.8	33
34	Estimation of Dense Time Series of Urban Air Temperatures from Multitemporal Geostationary Satellite Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 4129-4137.	2.3	32
35	Floristic mapping data as a proxy for the mean urban heat island. Climate Research, 2011, 49, 45-58.	0.4	31
36	Relation between Observed and Perceived Traffic Noise and Socio-Economic Status in Urban Blocks of Different Characteristics. Urban Science, 2018, 2, 20.	1.1	30

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37	Using OpenStreetMap (OSM) to enhance the classification of local climate zones in the framework of WUDAPT. Urban Climate, 2019, 28, 100456.	2.4	30
38	Enhanced Modeling of Annual Temperature Cycles with Temporally Discrete Remotely Sensed Thermal Observations. Remote Sensing, 2018, 10, 650.	1.8	27
39	Multitemporal Landsat data for urban heat island assessment and classification of local climate zones. , 2011, , .		26
40	Towards a satellite based monitoring of urban air temperatures. Sustainable Cities and Society, 2017, 34, 22-31.	5.1	25
41	Mapping the Spatiotemporal Dynamics of Europeâ€™s Land Surface Temperatures. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 202-206.	1.4	25
42	2017 IEEE GRSS Data Fusion Contest: Open Data for Global Multimodal Land Use Classification [Technical Committees]. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 70-73.	4.9	24
43	Urban Heat Islands Significantly Reduced by COVIDâ€19 Lockdown. Geophysical Research Letters, 2022, 49, .	1.5	24
44	Taxonomy of seasonal and diurnal clear-sky climatology of surface urban heat island dynamics across global cities. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 187, 14-33.	4.9	23
45	A Conceptual Modeling Approach to Health-Related Urban Well-Being. Urban Science, 2017, 1, 17.	1.1	22
46	Urban climate zone classification using convolutional neural network and ground-level images. Progress in Physical Geography, 2019, 43, 410-424.	1.4	22
47	Application of Thermal and Phenological Land Surface Parameters for Improving Ecological Niche Models of Betula utilis in the Himalayan Region. Remote Sensing, 2018, 10, 814.	1.8	21
48	A Weighted Accuracy Measure for Land Cover Mapping: Comment on Johnson et al. Local Climate Zone (LCZ) Map Accuracy Assessments Should Account for Land Cover Physical Characteristics that Affect the Local Thermal Environment. Remote Sens. 2019, 11, 2420. Remote Sensing, 2020, 12, 1769.	1.8	20
49	CrowdQC+â€”A Quality-Control for Crowdsourced Air-Temperature Observations Enabling World-Wide Urban Climate Applications. Frontiers in Environmental Science, 2021, 9, .	1.5	20
50	The Seasonality of Surface Urban Heat Islands across Climates. Remote Sensing, 2022, 14, 2318.	1.8	19
51	TOWARDS CONSISTENT MAPPING OF URBAN STRUCTURES â€“ GLOBAL HUMAN SETTLEMENT LAYER AND LOCAL CLIMATE ZONES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B8, 1371-1378.	0.2	17
52	Is It Possible to Distinguish Global and Regional Climate Change from Urban Land Cover Induced Signals? A Mid-Latitude City Example. Urban Science, 2018, 2, 12.	1.1	16
53	Urban Climate Informatics: An Emerging Research Field. Frontiers in Environmental Science, 2022, 10, .	1.5	14
54	Towards an urban roughness parameterisation using interferometric SAR data taking the Metropolitan Region of Hamburg as an example. Meteorologische Zeitschrift, 2011, 20, 29-37.	0.5	12

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55	Developing a community-based worldwide urban morphology and materials database (WUDAPT) using remote sensing and crowdsourcing for improved urban climate modelling. , 2015, , .		12
56	Statistical estimation of next-day nighttime surface urban heat islands. ISPRS Journal of Photogrammetry and Remote Sensing, 2021, 176, 182-195.	4.9	12
57	Satellite-derived quantification of the diurnal and annual dynamics of land surface temperature. Remote Sensing of Environment, 2021, 265, 112642.	4.6	11
58	Using OpenStreetMap data to assist in the creation of LCZ maps. , 2017, , .		10
59	Beyond the urban mask. , 2017, , .		10
60	The Human Influence Experiment (Part 2): Guidelines for Improved Mapping of Local Climate Zones Using a Supervised Classification. Urban Science, 2019, 3, 27.	1.1	10
61	Analytic Comparison of Temperature Lapse Rates and Precipitation Gradients in a Himalayan Treeline Environment: Implications for Statistical Downscaling. , 2016, , 49-64.		10
62	CLASSIFICATION AND MODELLING OF URBAN MICRO-CLIMATES USING MULTISENSORAL AND MULTITEMPORAL REMOTE SENSING DATA. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XXXIX-B8, 463-468.	0.2	10
63	TOWARDS CONSISTENT MAPPING OF URBAN STRUCTURES â€“ GLOBAL HUMAN SETTLEMENT LAYER AND LOCAL CLIMATE ZONES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B8, 1371-1378.	0.2	9
64	Multisensorale Fernerkundungsdaten zur mikroklimatischen Beschreibung und Klassifikation urbaner Strukturen. Photogrammetrie, Fernerkundung, Geoinformation, 2011, 2011, 325-338.	1.2	8
65	GIS in Climatology and Meteorology. , 2018, , 196-235.		7
66	Local climate zones and annual surface thermal response in a Mediterranean city. , 2017, , .		6
67	THE CLIMATE OF THE CANARY ISLANDS BY ANNUAL CYCLE PARAMETERS. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B8, 243-250.	0.2	6
68	High-resolution land use and land cover dataset for regional climate modelling: a plant functional type map for Europe 2015. Earth System Science Data, 2022, 14, 1735-1794.	3.7	6
69	Downscaling of diumal land surface temperature cycles for urban heat island monitoring. , 2013, , .		4
70	THE CLIMATE OF THE CANARY ISLANDS BY ANNUAL CYCLE PARAMETERS. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B8, 243-250.	0.2	4
71	Land Use Based Urban Vulnerability to Climate Change Assessment. , 2014, , .		4
72	Source area estimation of urban air temperatures. , 2015, , .		3

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73	Statistical modelling of snow cover dynamics in the Central Himalaya Region, Nepal. Climate Research, 2018, 75, 181-199.	0.4	3
74	The 2017 IEEE Geoscience and Remote Sensing Society Data Fusion Contest: Open Data for Global Multimodal Land Use Classification [Technical Committees]. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 110-114.	4.9	2
75	PLANHEATâ€™s Satellite-Derived Heating and Cooling Degrees Dataset for Energy Demand Mapping and Planning. Remote Sensing, 2019, 11, 2048.	1.8	2
76	Stadtklima in Hamburg. , 2018, , 37-53.		2
77	Empirical Evidences for Urban Influences on Public Health in Hamburg. Applied Sciences (Switzerland), 2019, 9, 2303.	1.3	1
78	Multi-Domain Design Structure Matrix Approach Applied to Urban System Modeling. Urban Science, 2020, 4, 28.	1.1	1
79	Die Hitze in der Stadt verstehen â€“ Wie sich die jahreszeitliche Temperaturdynamik von StÃdten aus dem All beobachten lÃsst. , 2015, , 205-216.		1
80	Recent advances in thermal remote sensing for urban planning and management. , 2015, , .		0
81	Seasonal Surface Urban Heat Island Analysis. , 2019, , .		0
82	A Satellite-derived Heating- and Cooling-Degrees Geospatial Dataset: Results for Antwerp. , 2019, , .		0
83	Conceptual Approach to Measure the Potential of Urban Heat Islands from Landuse Datasets and Landuse Projections. Lecture Notes in Computer Science, 2011, , 381-393.	1.0	0