Matthias Roth

List of Publications by Year
in descending order

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Version: 2024-02-01

49 papers	4,570 citations	159358 30 h-index	214527 47 g-index
50 all docs	50 docs citations	50 times ranked	3620 citing authors

#	Article	IF	Citations
1	Satellite-derived urban heat islands from three coastal cities and the utilization of such data in urban climatology. International Journal of Remote Sensing, 1989, 10, 1699-1720.	1.3	573
2	Review of atmospheric turbulence over cities. Quarterly Journal of the Royal Meteorological Society, 2000, 126, 941-990.	1.0	427
3	Temporal dynamics of the urban heat island of Singapore. International Journal of Climatology, 2006, 26, 2243-2260.	1.5	347
4	BUBBLE â€“ an Urban Boundary Layer Meteorology Project. Theoretical and Applied Climatology, 2005, 81, 231-261.	1.3	326
5	Review of urban climate research in (sub)tropical regions. International Journal of Climatology, 2007, 27, 1859-1873.	1.5	302
6	Climate and More Sustainable Cities: Climate Information for Improved Planning and Management of Cities (Producers/Capabilities Perspective). Procedia Environmental Sciences, 2010, 1, 247-274.	1.3	211
7	Diurnal and weekly variation of anthropogenic heat emissions in a tropical city, Singapore. Atmospheric Environment, 2012, 46, 92-103.	1.9	166
8	Does urban vegetation enhance carbon sequestration?. Landscape and Urban Planning, 2016, 148, 99-107.	3.4	151
9	Cities as Net Sources of CO₂: Review of Atmospheric CO₂ Exchange in Urban Environments Measured by Eddy Covariance Technique. Geography Compass, 2010, 4, 1238-1259.	1.5	138
10	Aerodynamic Roughness of Urban Areas Derived from Wind Observations. Boundary-Layer Meteorology, 1998, 89, 1-24.	1.2	133
11	Temporal dynamics of CO2 fluxes and profiles over a Central European city. Theoretical and Applied Climatology, 2006, 84, 117-126.	1.3	119
12	Relative Efficiencies of Turbulent Transfer of Heat, Mass, and Momentum over a Patchy Urban Surface. Journals of the Atmospheric Sciences, 1995, 52, 1863-1874.	0.6	106
13	A multiâ€resolution ensemble study of a tropical urban environment and its interactions with the background regional atmosphere. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9804-9818.	1.2	96
14	A historical review and assessment of urban heat island research in <scp>S</scp>ingapore. Singapore Journal of Tropical Geography, 2012, 33, 381-397.	0.6	94
15	Review of atmospheric turbulence over cities. , 2000, 126, 941.		92
16	Computationally efficient prediction of canopy level urban air temperature at the neighbourhood scale. Urban Climate, 2014, 9, 35-53.	2.4	91
17	Assessment of measured and perceived microclimates within a tropical urban forest. Urban Forestry and Urban Greening, 2016, 16, 62-75.	2.3	90
18	Tree effects on urban microclimate: Diurnal, seasonal, and climatic temperature differences explained by separating radiation, evapotranspiration, and roughness effects. Urban Forestry and Urban Greening, 2021, 58, 126970.	2.3	90

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19	PM_{2.5} Pollution Modulates Wintertime Urban Heat Island Intensity in the Beijingâ€Tianjinâ€Hebei Megalopolis, China. Geophysical Research Letters, 2020, 47, e2019GL084288.	1.5	88
20	Evaluation of canopy-layer air and mean radiant temperature simulations by a microclimate model over a tropical residential neighbourhood. Building and Environment, 2017, 112, 177-189.	3.0	86
21	An urban ecohydrological model to quantify the effect of vegetation on urban climate and hydrology (UT&C v1.0). Geoscientific Model Development, 2020, 13, 335-362.	1.3	79
22	The role of vegetation in the CO₂ flux from a tropical urban neighbourhood. Atmospheric Chemistry and Physics, 2013, 13, 10185-10202.	1.9	69
23	Area-Averaged Sensible Heat Flux and a New Method to Determine Zero-Plane Displacement Length over an Urban Surface using Scintillometry. Boundary-Layer Meteorology, 2002, 105, 177-193.	1.2	66
24	Multiâ€year energy balance and carbon dioxide fluxes over a residential neighbourhood in a tropical city. International Journal of Climatology, 2017, 37, 2679-2698.	1.5	62
25	Turbulent transfer relationships over an urban surface. II: Integral statistics. Quarterly Journal of the Royal Meteorological Society, 1993, 119, 1105-1120.	1.0	61
26	Impact of urban canopy models and external parameters on the modelled urban energy balance in a tropical city. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1581-1596.	1.0	58
27	Methodological Considerations Regarding the Measurement of Turbulent Fluxes in the Urban Roughness Sublayer: The Role of Scintillometery. Boundary-Layer Meteorology, 2006, 121, 351-375.	1.2	52
28	Impacts of urbanization on long-term fog variation in Anhui Province, China. Atmospheric Environment, 2008, 42, 8484-8492.	1.9	44
29	Review of Singapore's air quality and greenhouse gas emissions: Current situation and opportunities. Journal of the Air and Waste Management Association, 2012, 62, 625-641.	0.9	40
30	Prioritizing urban sustainability solutions: coordinated approaches must incorporate scale-dependent built environment induced effects. Environmental Research Letters, 2015, 10, 061001.	2.2	40
31	Evaluation of an urban canopy model in a tropical city: the role of tree evapotranspiration. Environmental Research Letters, 2017, 12, 094008.	2.2	39
32	Turbulent transfer relationships over an urban surface. I: Spectral characteristics. Quarterly Journal of the Royal Meteorological Society, 1993, 119, 1071-1104.	1.0	26
33	The suburban energy balance in miami, florida. Geografiska Annaler, Series A: Physical Geography, 2007, 89, 331-347.	0.6	25
34	Urbanâ€induced modifications to the diurnal cycle of rainfall over a tropical city. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 1189-1201.	1.0	24
35	Velocity and temperature spectra and cospectra in an unstable suburban atmosphere. Boundary-Layer Meteorology, 1989, 47, 309-320.	1.2	22
36	Turbulent transfer relationships over an urban surface. I. Spectral characteristics. Quarterly Journal of the Royal Meteorological Society, 1993, 119, 1071-1104.	1.0	20

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37	Can Surface-Cover Tiles Be Summed to Give Neighborhood Fluxes in Cities?. Journal of Applied Meteorology and Climatology, 2012, 51, 133-149.	0.6	19
38	Application of MORUSES singleâ€layer urban canopy model in a tropical city: Results from Singapore. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 576-597.	1.0	19
39	Small-scale spatial variability of turbulence statistics, (co)spectra and turbulent kinetic energy measured over a regular array of cube roughness. Environmental Fluid Mechanics, 2015, 15, 329-348.	0.7	16
40	Evaluation of an urban land surface scheme over a tropical suburban neighborhood. Theoretical and Applied Climatology, 2018, 133, 867-886.	1.3	11
41	Urban intensification of convective rainfall over the <scp>Singapore</scp> â€“ <scp>Johor Bahru</scp> region. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 3665-3680.	1.0	10
42	Increased Risk of Extreme Precipitation Over an Urban Agglomeration With Future Global Warming. Earth's Future, 2022, 10, .	2.4	9
43	ICUCâ€7 Urban Climate Special Issue. International Journal of Climatology, 2011, 31, 159-161.	1.5	5
44	Assessment of a meteorological mesoscale model's capability to simulate intra-urban thermal variability in a tropical city. Urban Climate, 2021, 40, 101006.	2.4	5
45	Urban Water Storage Capacity Inferred From Observed Evapotranspiration Recession. Geophysical Research Letters, 2022, 49, .	1.5	5
46	Urban Climatology ICUC6. International Journal of Climatology, 2007, 27, 1847-1848.	1.5	4
47	Using the spectral scaling exponent for validation of quantitative precipitation forecasts. Meteorology and Atmospheric Physics, 2012, 115, 35-45.	0.9	4
48	Evaluation of scintillometery measurements of fluxes of momentum and sensible heat in the roughness sublayer. Theoretical and Applied Climatology, 2016, 126, 673-681.	1.3	3
49	Turbulent transfer relationships over an urban surface. II: Integral statistics. , 1993, 119, 1105.		2