

Les Norford

List of Publications by Year in descending order

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93
papers

6,053
citations

81900

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71685

76
g-index

99
all docs

99
docs citations

99
times ranked

6260
citing authors

#	ARTICLE	IF	CITATIONS
1	The rise of low-cost sensing for managing air pollution in cities. Environment International, 2015, 75, 199-205.	10.0	597
2	Ultrafine particles in cities. Environment International, 2014, 66, 1-10.	10.0	483
3	Power signature analysis. IEEE Power and Energy Magazine, 2003, 1, 56-63.	1.6	452
4	An intrinsically stretchable humidity sensor based on anti-drying, self-healing and transparent organohydrogels. Materials Horizons, 2019, 6, 595-603.	12.2	297
5	The urban weather generator. Journal of Building Performance Simulation, 2013, 6, 269-281.	2.0	230
6	Improving air quality in high-density cities by understanding the relationship between air pollutant dispersion and urban morphologies. Building and Environment, 2014, 71, 245-258.	6.9	225
7	Nonintrusive Load Monitoring and Diagnostics in Power Systems. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1445-1454.	4.7	207
8	Mapping sky, tree, and building view factors of street canyons in a high-density urban environment. Building and Environment, 2018, 134, 155-167.	6.9	193
9	Extremely Deformable, Transparent, and High-Performance Gas Sensor Based on Ionic Conductive Hydrogel. ACS Applied Materials & Interfaces, 2019, 11, 2364-2373.	8.0	180
10	Highly Stretchable and Transparent Thermistor Based on Self-Healing Double Network Hydrogel. ACS Applied Materials & Interfaces, 2018, 10, 19097-19105.	8.0	168
11	Facile Synthesis of 3D Graphene Flowers for Ultrasensitive and Highly Reversible Gas Sensing. Advanced Functional Materials, 2016, 26, 7462-7469.	14.9	149
12	Evaluation of cool roof and vegetations in mitigating urban heat island in a tropical city, Singapore. Urban Climate, 2016, 16, 59-74.	5.7	147
13	Transfer learning with deep neural networks for model predictive control of HVAC and natural ventilation in smart buildings. Journal of Cleaner Production, 2020, 254, 119866.	9.3	147
14	A multi-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.	3.3	96
15	Computationally efficient prediction of canopy level urban air temperature at the neighbourhood scale. Urban Climate, 2014, 9, 35-53.	5.7	91
16	Large-Eddy Simulation of Flow and Pollutant Transport in Urban Street Canyons with Ground Heating. Boundary-Layer Meteorology, 2010, 137, 187-204.	2.3	88
17	Impact of urbanization patterns on the local climate of a tropical city, Singapore: An ensemble study. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4386-4403.	3.3	81
18	Flow and Pollutant Transport in Urban Street Canyons of Different Aspect Ratios with Ground Heating: Large-Eddy Simulation. Boundary-Layer Meteorology, 2012, 142, 289-304.	2.3	77

#	ARTICLE	IF	CITATIONS
19	Combining a Detailed Building Energy Model with a Physically-Based Urban Canopy Model. Boundary-Layer Meteorology, 2011, 140, 471-489.	2.3	71
20	Achieving natural ventilation potential in practice: Control schemes and levels of automation. Applied Energy, 2019, 235, 1141-1152.	10.1	71
21	Spatiotemporal patterns of street-level solar radiation estimated using Google Street View in a high-density urban environment. Building and Environment, 2019, 148, 547-566.	6.9	66
22	Predicting outdoor thermal comfort in urban environments: A 3D numerical model for standard effective temperature. Urban Climate, 2017, 20, 251-267.	5.7	65
23	Naturally ventilated and mixed-mode buildingsâ€”Part II: Optimal control. Building and Environment, 2009, 44, 750-761.	6.9	63
24	Interaction between heat wave and urban heat island: A case study in a tropical coastal city, Singapore. Atmospheric Research, 2021, 247, 105134.	4.1	62
25	A semi-empirical model for the effect of trees on the urban wind environment. Landscape and Urban Planning, 2017, 168, 84-93.	7.5	60
26	Flows across high aspect ratio street canyons: Reynolds number independence revisited. Environmental Fluid Mechanics, 2018, 18, 1275-1291.	1.6	60
27	Conditions for thermal circulation in urban street canyons. Building and Environment, 2014, 80, 184-191.	6.9	56
28	Highâ€”Resolution, Multilayer Modeling of Singapore's Urban Climate Incorporating Local Climate Zones. Journal of Geophysical Research D: Atmospheres, 2019, 124, 7764-7785.	3.3	56
29	Outdoor thermal comfort autonomy: Performance metrics for climate-conscious urban design. Building and Environment, 2019, 155, 145-160.	6.9	52
30	Modeling environment for model predictive control of buildings. Energy and Buildings, 2014, 85, 549-559.	6.7	51
31	Analysis and Experimental Implementation of Grid Frequency Regulation Using Behind-the-Meter Batteries Compensating for Fast Load Demand Variations. IEEE Transactions on Power Systems, 2017, 32, 484-498.	6.5	51
32	Global sensitivity analysis of an urban microclimate system under uncertainty: Design and case study. Building and Environment, 2017, 124, 153-170.	6.9	51
33	High Sensitivity, Miniature, Full 2-D Anemometer Based on MEMS Hot-Film Sensors. IEEE Sensors Journal, 2013, 13, 1914-1920.	4.7	50
34	Buoyant flows in street canyons: Comparison of RANS and LES at reduced and full scales. Building and Environment, 2018, 146, 77-87.	6.9	50
35	Pedestrian-Level Urban Wind Flow Enhancement with Wind Catchers. Atmosphere, 2017, 8, 159.	2.3	44
36	Validation of UWG and ENVI-Met Models in an Abu Dhabi District, Based on Site Measurements. Sustainability, 2019, 11, 4378.	3.2	44

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37	Project Coolbit: can your watch predict heat stress and thermal comfort sensation?. Environmental Research Letters, 2021, 16, 034031.	5.2	44
38	Naturally ventilated and mixed-mode buildingsâ€™ Part I: Thermal modeling. Building and Environment, 2009, 44, 736-749.	6.9	43
39	Effects of Roof-Edge Roughness on Air Temperature and Pollutant Concentration in Urban Canyons. Boundary-Layer Meteorology, 2017, 164, 249-279.	2.3	42
40	Thermal impact of the orientation and height of vertical greenery on pedestrians in a tropical area. Building Simulation, 2019, 12, 973-984.	5.6	40
41	Pedestrian-level wind speed enhancement in urban street canyons with void decks. Building and Environment, 2018, 146, 64-76.	6.9	39
42	Calculation of Air Temperatures above the Urban Canopy Layer from Measurements at a Rural Operational Weather Station. Journal of Applied Meteorology and Climatology, 2013, 52, 472-483.	1.5	38
43	Indoor air quality among Mumbai's resettled populations: Comparing Dharavi slum to nearby rehabilitation sites. Building and Environment, 2020, 167, 106419.	6.9	38
44	An interactive expert system for daylighting design exploration. Building and Environment, 2011, 46, 2351-2364.	6.9	36
45	Multilayer urban canopy modelling and mapping for traffic pollutant dispersion at high density urban areas. Science of the Total Environment, 2019, 647, 255-267.	8.0	36
46	Demonstration of HVAC chiller control for power grid frequency regulationâ€™ Part 1: Controller development and experimental results. Science and Technology for the Built Environment, 2015, 21, 1134-1142.	1.7	34
47	Transport processes in and above two-dimensional urban street canyons under different stratification conditions: results from numerical simulation. Environmental Fluid Mechanics, 2015, 15, 399-417.	1.6	34
48	Technologies and Magnitude of Ancillary Services Provided by Commercial Buildings. Proceedings of the IEEE, 2016, 104, 758-779.	21.3	34
49	Numerical modeling of outdoor thermal comfort in 3D. Urban Climate, 2018, 26, 212-230.	5.7	34
50	Investigating the association of healthcare-seeking behavior with the freshness of indoor spaces in low-income tenement housing in Mumbai. Habitat International, 2018, 71, 156-168.	5.8	32
51	Effectiveness of cool walls on cooling load and urban temperature in a tropical climate. Energy and Buildings, 2019, 187, 144-162.	6.7	31
52	Modelling the influence of high-rise urban geometry on outdoor thermal comfort in Singapore. Urban Climate, 2021, 36, 100775.	5.7	30
53	Pedestrian-level wind speed enhancement with void decks in three-dimensional urban street canyons. Building and Environment, 2019, 155, 399-407.	6.9	29
54	On thermally forced flows in urban street canyons. Environmental Fluid Mechanics, 2014, 14, 1427-1441.	1.6	28

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55	Estimation of urban temperature and humidity using a lumped parameter model coupled with an EnergyPlus model. <i>Energy and Buildings</i> , 2015, 96, 221-235.	6.7	27
56	Evaluating approaches for district-wide energy model calibration considering the Urban Heat Island effect. <i>Applied Energy</i> , 2018, 215, 31-40.	10.1	24
57	Demonstration of HVAC chiller control for power grid frequency regulation—Part 2: Discussion of results and considerations for broader deployment. <i>Science and Technology for the Built Environment</i> , 2015, 21, 1143-1153.	1.7	23
58	Dynamic simulation and analysis of ancillary service demand response strategies for variable air volume HVAC systems. <i>HVAC and R Research</i> , 2014, 20, 908-921.	0.6	22
59	Impacts of Realistic Urban Heating. Part II: Air Quality and City Breathability. <i>Boundary-Layer Meteorology</i> , 2018, 168, 321-341.	2.3	22
60	A novel multi-market optimization problem for commercial heating, ventilation, and air-conditioning systems providing ancillary services using multi-zone inverse comprehensive room transfer functions. <i>Science and Technology for the Built Environment</i> , 2016, 22, 783-797.	1.7	20
61	Case study results: fault detection in air-handling units in buildings. <i>Advances in Building Energy Research</i> , 2020, 14, 305-321.	2.3	20
62	The Vertical City Weather Generator (VCWG v1.3.2). <i>Geoscientific Model Development</i> , 2021, 14, 961-984.	3.6	20
63	Climate-informed decision-making for urban design: Assessing the impact of urban morphology on urban heat island. <i>Urban Climate</i> , 2021, 36, 100776.	5.7	19
64	Clustering weather types for urban outdoor thermal comfort evaluation in a tropical area. <i>Theoretical and Applied Climatology</i> , 2020, 139, 659-675.	2.8	18
65	Atmospheric and emissivity corrections for ground-based thermography using 3D radiative transfer modelling. <i>Remote Sensing of Environment</i> , 2020, 237, 111524.	11.0	18
66	Numerical analysis of the impact of anthropogenic emissions on the urban environment of Singapore. <i>Science of the Total Environment</i> , 2022, 806, 150534.	8.0	18
67	Evaluating Urban Forms for Comparison Studies in the Massing Design Stage. <i>Sustainability</i> , 2017, 9, 987.	3.2	17
68	Large global variations in measured airborne metal concentrations driven by anthropogenic sources. <i>Scientific Reports</i> , 2020, 10, 21817.	3.3	17
69	Measuring and comparing thermal comfort in outdoor and semi-outdoor spaces in tropical Singapore. <i>Urban Climate</i> , 2022, 42, 101122.	5.7	17
70	Optimization-aided calibration of an urban microclimate model under uncertainty. <i>Building and Environment</i> , 2018, 143, 390-403.	6.9	15
71	Demand Smoothing in Military Microgrids Through Coordinated Direct Load Control. <i>IEEE Transactions on Smart Grid</i> , 2020, 11, 1917-1927.	9.0	14
72	Climate-Conscious Urban Growth Mitigates Urban Warming: Evidence from Shenzhen, China. <i>Environmental Science & Technology</i> , 2019, 53, 11960-11968.	10.0	13

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73	Power Line Communication for Low-Bandwidth Control and Sensing. IEEE Transactions on Power Delivery, 2022, 37, 2172-2181.	4.3	13
74	Shape Generation Using Pareto Genetic Algorithms: Integrating Conflicting Design Objectives in Low-Energy Architecture. International Journal of Architectural Computing, 2003, 1, 503-515.	1.5	12
75	Variable speed heat pump design for frequency regulation through direct load control. , 2014, , .		11
76	An aerodynamically efficient sphere anemometer with integrated hot-film sensors for 2-D environmental airflow monitoring. , 2011, , .		10
77	The universal scaling characteristics of tropical oceanic rain clusters. Journal of Geophysical Research D: Atmospheres, 2017, 122, 5582-5599.	3.3	9
78	Affordable, safe housing based on expanded polystyrene (EPS) foam and a cementitious coating. Journal of Materials Science, 2006, 41, 6908-6916.	3.7	8
79	Analyzing Thermal Comfort Sensations in Semi-Outdoor Space on a University Campus: On-Site Measurements in Tehran's Hot and Cold Seasons. Atmosphere, 2022, 13, 1034.	2.3	8
80	Outdoor performance of the black globe temperature sensor on a hot and humid tropical region. Environmental Technology (United Kingdom), 2021, , 1-13.	2.2	7
81	Distributed Peak Shaving for Small Aggregations of Cyclic Loads. IEEE Transactions on Power Delivery, 2022, 37, 4315-4325.	4.3	7
82	Nonintrusive Load Monitoring of Variable Speed Drive Cooling Systems. IEEE Access, 2020, 8, 211451-211463.	4.2	6
83	Evaluating the Meteorological Effects on the Urban Form's Air Quality Relationship Using Mobile Monitoring. Environmental Science & Technology, 2022, 56, 7328-7336.	10.0	6
84	A two-step method for estimating the parameters of induction machine models. , 2009, , .		5
85	Hair-like airflow sensing with piezoelectric vibrating diaphragm. , 2010, , .		4
86	Distributed Load Control Using Reliable Low-Data-Rate Power Line Communication. IEEE Access, 2022, 10, 50242-50253.	4.2	4
87	Price-based demand response of energy storage resources in commercial buildings. , 2016, , .		2
88	Urban Weather Generator: Physics-Based Microclimate Simulation for Performance-Oriented Urban Planning. , 2021, , 241-263.		2
89	Reply to Comment by Velasco on "High-Resolution, Multilayer Modeling of Singapore's Urban Climate Incorporating Local Climate Zones". Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034160.	3.3	2
90	Scaling characteristics of modelled tropical oceanic rain clusters. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 1055-1069.	2.7	1

#	ARTICLE	IF	CITATIONS
91	Analysis of a building power system with a rooftop PV array and phevs as an aggregator. , 2013, , .		0
92	Recent advances of modeling lidar data using dart and radiometric calibration coefficient from LVIS waveforms comparison. , 2017, , .		0
93	Non-intrusive cooling tower model validation: Results from a case study. Science and Technology for the Built Environment, 2020, 26, 1204-1215.	1.7	0