

Riccardo Buccolieri

List of Publications by Year in descending order

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71
papers

3,897
citations

147566

31
h-index

118652

62
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71
all docs

71
docs citations

71
times ranked

2162
citing authors

#	ARTICLE	IF	CITATIONS
1	Dispersion study in a street canyon with tree planting by means of wind tunnel and numerical investigations – Evaluation of CFD data with experimental data. Atmospheric Environment, 2008, 42, 8640-8650.	1.9	349
2	The influence of building height variability on pollutant dispersion and pedestrian ventilation in idealized high-rise urban areas. Building and Environment, 2012, 56, 346-360.	3.0	314
3	Aerodynamic effects of trees on pollutant concentration in street canyons. Science of the Total Environment, 2009, 407, 5247-5256.	3.9	233
4	City breathability and its link to pollutant concentration distribution within urban-like geometries. Atmospheric Environment, 2010, 44, 1894-1903.	1.9	228
5	Numerical simulation of atmospheric pollutant dispersion in an urban street canyon: Comparison between RANS and LES. Journal of Wind Engineering and Industrial Aerodynamics, 2011, 99, 103-113.	1.7	221
6	Simulations of pollutant dispersion within idealised urban-type geometries with CFD and integral models. Atmospheric Environment, 2007, 41, 8316-8329.	1.9	191
7	Analysis of local scale tree-atmosphere interaction on pollutant concentration in idealized street canyons and application to a real urban junction. Atmospheric Environment, 2011, 45, 1702-1713.	1.9	189
8	Air quality affected by trees in real street canyons: The case of Marylebone neighbourhood in central London. Urban Forestry and Urban Greening, 2017, 22, 41-53.	2.3	162
9	Review on urban tree modelling in CFD simulations: Aerodynamic, deposition and thermal effects. Urban Forestry and Urban Greening, 2018, 31, 212-220.	2.3	135
10	City breathability in medium density urban-like geometries evaluated through the pollutant transport rate and the net escape velocity. Building and Environment, 2015, 94, 166-182.	3.0	113
11	The impact of trees on street ventilation, NOx and PM2.5 concentrations across heights in Marylebone Rd street canyon, central London. Sustainable Cities and Society, 2018, 41, 227-241.	5.1	89
12	Flow and Pollutant Dispersion in Street Canyons using FLUENT and ADMS-Urban. Environmental Modeling and Assessment, 2008, 13, 369-381.	1.2	88
13	The breathability of compact cities. Urban Climate, 2015, 13, 73-93.	2.4	82
14	On the contribution of mean flow and turbulence to city breathability: The case of long streets with tall buildings. Science of the Total Environment, 2012, 416, 362-373.	3.9	79
15	Integrated impacts of tree planting and street aspect ratios on CO dispersion and personal exposure in full-scale street canyons. Building and Environment, 2020, 169, 106529.	3.0	78
16	Planning of Urban Green Spaces: An Ecological Perspective on Human Benefits. Land, 2021, 10, 105.	1.2	78
17	Recent advancements in numerical modelling of flow and dispersion in urban areas: a short review. International Journal of Environment and Pollution, 2013, 52, 172.	0.2	76
18	The ‘œplant evaluation model’ for the assessment of the impact of vegetation on outdoor microclimate in the urban environment. Building and Environment, 2019, 159, 106151.	3.0	70

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19	Assessment of Indoor-Outdoor Particulate Matter Air Pollution: A Review. <i>Atmosphere</i> , 2017, 8, 136.	1.0	69
20	COST 732 in practice: the MUST model evaluation exercise. <i>International Journal of Environment and Pollution</i> , 2011, 44, 403.	0.2	67
21	Study of the effect of green quantity and structure on thermal comfort and air quality in an urban-like residential district by ENVI-met modelling. <i>Building Simulation</i> , 2019, 12, 183-194.	3.0	67
22	The Impact of Green Space Layouts on Microclimate and Air Quality in Residential Districts of Nanjing, China. <i>Forests</i> , 2018, 9, 224.	0.9	65
23	Validation of temperature-perturbation and CFD-based modelling for the prediction of the thermal urban environment: the Lecce (IT) case study. <i>Environmental Modelling and Software</i> , 2014, 60, 69-83.	1.9	61
24	CFD modelling of vegetation barrier effects on the reduction of traffic-related pollutant concentration in an avenue of Pamplona, Spain. <i>Sustainable Cities and Society</i> , 2019, 48, 101559.	5.1	51
25	On the influence of viaduct and ground heating on pollutant dispersion in 2D street canyons and toward single-sided ventilated buildings. <i>Atmospheric Pollution Research</i> , 2016, 7, 817-832.	1.8	50
26	Impact of Urban Vegetation on Outdoor Thermal Comfort: Comparison between a Mediterranean City (Lecce, Italy) and a Northern European City (Lahti, Finland). <i>Forests</i> , 2020, 11, 228.	0.9	50
27	The Impact of Planting Trees on NOx Concentrations: The Case of the Plaza de la Cruz Neighborhood in Pamplona (Spain). <i>Atmosphere</i> , 2017, 8, 131.	1.0	41
28	An Investigation of the Quantitative Correlation between Urban Morphology Parameters and Outdoor Ventilation Efficiency Indices. <i>Atmosphere</i> , 2019, 10, 33.	1.0	40
29	Indices employed for the assessment of "urban outdoor ventilation" - A review. <i>Atmospheric Environment</i> , 2020, 223, 117211.	1.9	38
30	The effects of trees on micrometeorology in a real street canyon: consequences for local air quality. <i>International Journal of Environment and Pollution</i> , 2015, 58, 100.	0.2	36
31	Urban ventilation of typical residential streets and impact of building form variation. <i>Sustainable Cities and Society</i> , 2021, 67, 102735.	5.1	35
32	Characterizing the morphology of real street models and modeling its effect on thermal environment. <i>Energy and Buildings</i> , 2019, 203, 109433.	3.1	25
33	Impact of indoor-outdoor temperature differences on dispersion of gaseous pollutant and particles in idealized street canyons with and without viaduct settings. <i>Building Simulation</i> , 2019, 12, 285-297.	3.0	24
34	On the Impact of Trees on Ventilation in a Real Street in Pamplona, Spain. <i>Atmosphere</i> , 2019, 10, 697.	1.0	23
35	Reprint of: Review on urban tree modelling in CFD simulations: Aerodynamic, deposition and thermal effects. <i>Urban Forestry and Urban Greening</i> , 2019, 37, 56-64.	2.3	22
36	A Numerical Study on the Correlation between Sky View Factor and Summer Microclimate of Local Climate Zones. <i>Atmosphere</i> , 2019, 10, 438.	1.0	22

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37	Recent Advances in Urban Ventilation Assessment and Flow Modelling. <i>Atmosphere</i> , 2019, 10, 144.	1.0	22
38	The impact of semi-open settings on ventilation in idealized building arrays. <i>Urban Climate</i> , 2018, 25, 196-217.	2.4	20
39	Effect of greening on pollutant dispersion and ventilation at urban street intersections. <i>Building and Environment</i> , 2021, 203, 108075.	3.0	20
40	Changes in Olive Urban Forests Infected by <i>Xylella fastidiosa</i> : Impact on Microclimate and Social Health. <i>International Journal of Environmental Research and Public Health</i> , 2019, 16, 2642.	1.2	19
41	A Conceptual Framework to Design Green Infrastructure: Ecosystem Services as an Opportunity for Creating Shared Value in Ground Photovoltaic Systems. <i>Land</i> , 2020, 9, 238.	1.2	18
42	CFD modelling: The most useful tool for developing mesoscale urban canopy parameterizations. <i>Building Simulation</i> , 2021, 14, 407-419.	3.0	18
43	Investigation of typical residential block typologies and their impact on pedestrian-level microclimate in summers in Nanjing, China. <i>Frontiers of Architectural Research</i> , 2022, 11, 278-296.	1.3	18
44	Direct measurements of the drag force over aligned arrays of cubes exposed to boundary-layer flows. <i>Environmental Fluid Mechanics</i> , 2017, 17, 373-394.	0.7	15
45	The drag force distribution within regular arrays of cubes and its relation to cross ventilation – Theoretical and experimental analyses. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2019, 189, 91-103.	1.7	15
46	Scale-adaptive morphometric analysis for urban air quality and ventilation applications. <i>Building Research and Information</i> , 2018, 46, 931-951.	2.0	14
47	Obstacles influence on existing urban canyon ventilation and air pollutant concentration: A review of potential measures. <i>Building and Environment</i> , 2022, 214, 108905.	3.0	13
48	Recurrence Analysis of Vegetation Indices for Highlighting the Ecosystem Response to Drought Events: An Application to the Amazon Forest. <i>Remote Sensing</i> , 2020, 12, 907.	1.8	12
49	Climate Change Impacts on Plant Phenology: Grapevine (<i>Vitis vinifera</i>) Bud Break in Wintertime in Southern Italy. <i>Foods</i> , 2021, 10, 2769.	1.9	12
50	Characterization of Urban Greening in a District of Lecce (Southern Italy) for the Analysis of CO ₂ Storage and Air Pollutant Dispersion. <i>Atmosphere</i> , 2020, 11, 967.	1.0	11
51	Large eddy simulation of the aerodynamic effects of trees on pollutant concentrations in street canyons. <i>Procedia Environmental Sciences</i> , 2011, 4, 17-24.	1.3	10
52	On the effects of urban-like intersections on ventilation and pollutant dispersion. <i>Building Simulation</i> , 2022, 15, 419-433.	3.0	10
53	Impact of ship emissions on local air quality in a Mediterranean city's harbour after the European sulphur directive. <i>International Journal of Environment and Pollution</i> , 2016, 59, 30.	0.2	9
54	An application of ventilation efficiency concepts to the analysis of building density effects on urban flow and pollutant concentration. <i>International Journal of Environment and Pollution</i> , 2011, 47, 248.	0.2	8

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55	Analysis of Urban Greening Scenarios for Improving Outdoor Thermal Comfort in Neighbourhoods of Lecce (Southern Italy). <i>Climate</i> , 2021, 9, 116.	1.2	8
56	How Ecosystem Services Can Strengthen the Regeneration Policies for Monumental Olive Groves Destroyed by <i>Xylella fastidiosa</i> Bacterium in a Peri-Urban Area. <i>Sustainability</i> , 2021, 13, 8778.	1.6	8
57	Chapter 1.1 Application and validation of FLUENT flow and dispersion modelling within complex geometries. <i>Developments in Environmental Science</i> , 2007, , 3-11.	0.5	7
58	Study of the urban heat island in Lecce (Italy) by means of ADMS and ENVI-MET. <i>International Journal of Environment and Pollution</i> , 2014, 55, 41.	0.2	7
59	Polycyclic aromatic hydrocarbons in a bakery indoor air: trends, dynamics, and dispersion. <i>Environmental Science and Pollution Research</i> , 2018, 25, 28760-28771.	2.7	7
60	MUST experiment simulations using CFD and integral models. <i>International Journal of Environment and Pollution</i> , 2011, 44, 376.	0.2	6
61	The Challenge in the Management of Historic Trees in Urban Environments during Climate Change: The Case of Corso Trieste (Rome, Italy). <i>Atmosphere</i> , 2021, 12, 500.	1.0	6
62	Spatial Distribution of Air Pollutants in Cities. , 2018, , 75-95.		5
63	Analysis of Olive Grove Destruction by <i>Xylella fastidiosa</i> Bacterium on the Land Surface Temperature in Salento Detected Using Satellite Images. <i>Forests</i> , 2021, 12, 1266.	0.9	5
64	High Spatial Resolution Assessment of the Effect of the Spanish National Air Pollution Control Programme on Street-Level NO ₂ Concentrations in Three Neighborhoods of Madrid (Spain) Using Mesoscale and CFD Modelling. <i>Atmosphere</i> , 2022, 13, 248.	1.0	4
65	A fast model for pollutant dispersion at the neighbourhood scale. <i>International Journal of Environment and Pollution</i> , 2011, 47, 207.	0.2	3
66	Urban Obstacles Influence on Street Canyon Ventilation: A Brief Review. <i>Environmental Sciences Proceedings</i> , 2021, 8, .	0.3	2
67	Influence of Ship Emissions on Ozone Concentration in a Mediterranean Area: A Modelling Approach. <i>Springer Proceedings in Complexity</i> , 2018, , 317-321.	0.2	2
68	The Effects of Trees on Micrometeorology in a Medium-Size Mediterranean City: In Situ Experiments and Numerical Simulations. , 2014, , .		1
69	Combining Chemical Composition Data and Numerical Modelling for the Assessment of Air Quality in a Mediterranean Port City. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2181.	1.3	1
70	A Modeling Study of the Influence of Biogenic Emissions on Ozone Concentration in a Mediterranean City. <i>Springer Proceedings in Complexity</i> , 2021, , 301-306.	0.2	0
71	Study of the Effects of Urban Vegetation on Thermal Comfort in a Neighbourhood of Lahti (Finland). <i>Springer Proceedings in Complexity</i> , 2021, , 313-318.	0.2	0