

# Twan van Hooff

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

53  
papers

2,400  
citations

25  
h-index

48  
g-index

53  
ext. papers

2,861  
ext. citations

5.5  
avg, IF

5.65  
L-index

#	Paper	IF	Citations
53	Performance of building integrated photovoltaic facades: Impact of exterior convective heat transfer. <i>Applied Energy</i> , <b>2021</b> , 287, 116538	10.7	5
52	Impact of a wall downstream of an air curtain nozzle on air curtain separation efficiency. <i>Building and Environment</i> , <b>2021</b> , 197, 107873	6.5	1
51	Optimization of thin-walled beam structures: Monolithic versus staggered solution schemes. <i>Thin-Walled Structures</i> , <b>2021</b> , 159, 107182	4.7	3
50	Air curtain performance: Introducing the adapted separation efficiency. <i>Building and Environment</i> , <b>2021</b> , 188, 107468	6.5	1
49	Simulating building integrated photovoltaic facades: Comparison to experimental data and evaluation of modelling complexity. <i>Applied Energy</i> , <b>2021</b> , 281, 116032	10.7	10
48	Sequentially coupled shape and topology optimization for 2.5D and 3D beam models. <i>Acta Mechanica</i> , <b>2021</b> , 232, 1683-1708	2.1	1
47	A physics-based high-resolution BIPV model for building performance simulations. <i>Solar Energy</i> , <b>2020</b> , 204, 585-599	6.8	13
46	Minimum momentum flux ratio required to prevent air curtain breakthrough in case of cross-curtain pressure gradients: CFD versus analytical equation. <i>Building Simulation</i> , <b>2020</b> , 13, 943-960	3.9	1
45	Coupled aerostructural shape and topology optimization of horizontal-axis wind turbine rotor blades. <i>Energy Conversion and Management</i> , <b>2020</b> , 212, 112621	10.6	8
44	Mixing ventilation driven by two oppositely located supply jets with a time-periodic supply velocity: A numerical analysis using computational fluid dynamics. <i>Indoor and Built Environment</i> , <b>2020</b> , 29, 603-620	1.8	16
43	Modeling transient particle transport in transient indoor airflow by fast fluid dynamics with the Markov chain method. <i>Building and Environment</i> , <b>2020</b> , 186, 107323	6.5	11
42	Understanding the behaviour of naturally-ventilated BIPV modules: A sensitivity analysis. <i>Renewable Energy</i> , <b>2020</b> , 161, 133-148	8.1	11
41	Reduction of particulate matter concentrations by local removal in a building courtyard: Case study for the Delhi American Embassy School. <i>Science of the Total Environment</i> , <b>2019</b> , 686, 657-680	10.2	13
40	Cross-ventilation in a generic isolated building equipped with louvers: Wind-tunnel experiments and CFD simulations. <i>Building and Environment</i> , <b>2019</b> , 154, 263-280	6.5	36
39	Natural ventilation of an isolated generic building with a windward window and different windexchangers: CFD validation, sensitivity study and performance analysis. <i>Building Simulation</i> , <b>2019</b> , 12, 475-488	3.9	12
38	CFD evaluation of building geometry modifications to reduce pedestrian-level wind speed. <i>Building and Environment</i> , <b>2019</b> , 163, 106293	6.5	47
37	Validation of steady RANS modelling of isothermal plane turbulent impinging jets at moderate Reynolds numbers. <i>European Journal of Mechanics, B/Fluids</i> , <b>2019</b> , 75, 228-243	2.4	9

36	CFD simulation of non-isothermal mixing ventilation in a generic enclosure: Impact of computational and physical parameters. <i>International Journal of Thermal Sciences</i> , <b>2018</b> , 129, 343-357	4.1	12
35	Computational fluid dynamics predictions of non-isothermal ventilation flow-How can the user factor be minimized?. <i>Indoor Air</i> , <b>2018</b> , 28, 866-880	5.4	12
34	Impact of passive climate adaptation measures and building orientation on the energy demand of a detached lightweight semi-portable building. <i>Building Simulation</i> , <b>2018</b> , 11, 1163-1177	3.9	11
33	CFD simulation of snow transport over flat, uniformly rough, open terrain: Impact of physical and computational parameters. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2018</b> , 177, 213-226	3.7	21
32	Low-Reynolds number mixing ventilation flows: Impact of physical and numerical diffusion on flow and dispersion. <i>Building Simulation</i> , <b>2017</b> , 10, 589-606	3.9	4
31	On the accuracy of CFD simulations of cross-ventilation flows for a generic isolated building: Comparison of RANS, LES and experiments. <i>Building and Environment</i> , <b>2017</b> , 114, 148-165	6.5	150
30	CFD Methodology Development for Singapore Green Mark Building Application. <i>Procedia Engineering</i> , <b>2017</b> , 180, 1596-1602		6
29	Analysis of the predicted effect of passive climate adaptation measures on energy demand for cooling and heating in a residential building. <i>Energy</i> , <b>2016</b> , 94, 811-820	7.9	74
28	CFD simulation of wind-driven upward cross ventilation and its enhancement in long buildings: Impact of single-span versus double-span leeward sawtooth roof and opening ratio. <i>Building and Environment</i> , <b>2016</b> , 96, 142-156	6.5	28
27	Reduction of outdoor particulate matter concentrations by local removal in semi-enclosed parking garages: A preliminary case study for Eindhoven city center. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2016</b> , 159, 80-98	3.7	42
26	Impact of eaves on cross-ventilation of a generic isolated leeward sawtooth roof building: Windward eaves, leeward eaves and eaves inclination. <i>Building and Environment</i> , <b>2015</b> , 92, 578-590	6.5	31
25	Impact of roof geometry of an isolated leeward sawtooth roof building on cross-ventilation: Straight, concave, hybrid or convex?. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2015</b> , 145, 102-114	3.7	25
24	CFD analysis of cross-ventilation of a generic isolated building with asymmetric opening positions: Impact of roof angle and opening location. <i>Building and Environment</i> , <b>2015</b> , 85, 263-276	6.5	105
23	CFD analysis of transpirational cooling by vegetation: Case study for specific meteorological conditions during a heat wave in Arnhem, Netherlands. <i>Building and Environment</i> , <b>2015</b> , 83, 11-26	6.5	118
22	Reprint of: On the predicted effectiveness of climate adaptation measures for residential buildings. <i>Building and Environment</i> , <b>2015</b> , 83, 142-158	6.5	37
21	Overview of challenges and achievements in the climate adaptation of cities and in the Climate Proof Cities program. <i>Building and Environment</i> , <b>2015</b> , 83, 1-10	6.5	39
20	CFD simulation and validation of urban microclimate: A case study for Bergpolder Zuid, Rotterdam. <i>Building and Environment</i> , <b>2015</b> , 83, 79-90	6.5	165
19	On the predicted effectiveness of climate adaptation measures for residential buildings. <i>Building and Environment</i> , <b>2014</b> , 82, 300-316	6.5	38

18	Counter-gradient diffusion in a slot-ventilated enclosure assessed by LES and RANS. <i>Computers and Fluids</i> , <b>2014</b> , 96, 63-75	2.8	17
17	On the suitability of steady RANS CFD for forced mixing ventilation at transitional slot Reynolds numbers. <i>Indoor Air</i> , <b>2013</b> , 23, 236-49	5.4	35
16	CFD evaluation of new second-skin facade concept for wind comfort on building balconies: Case study for the Park Tower in Antwerp. <i>Building and Environment</i> , <b>2013</b> , 68, 179-192	6.5	56
15	CFD evaluation of natural ventilation of indoor environments by the concentration decay method: CO2 gas dispersion from a semi-enclosed stadium. <i>Building and Environment</i> , <b>2013</b> , 61, 1-17	6.5	97
14	Pedestrian wind comfort around buildings: Comparison of wind comfort criteria based on whole-flow field data for a complex case study. <i>Building and Environment</i> , <b>2013</b> , 59, 547-562	6.5	119
13	CFD simulation for pedestrian wind comfort and wind safety in urban areas: General decision framework and case study for the Eindhoven University campus. <i>Environmental Modelling and Software</i> , <b>2012</b> , 30, 15-34	5.2	240
12	Full-scale measurements of indoor environmental conditions and natural ventilation in a large semi-enclosed stadium: Possibilities and limitations for CFD validation. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2012</b> , 104-106, 330-341	3.7	52
11	Numerical analysis of the performance of a venturi-shaped roof for natural ventilation: Influence of building width. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2012</b> , 104-106, 419-427	3.7	21
10	PIV measurements of a plane wall jet in a confined space at transitional slot Reynolds numbers. <i>Experiments in Fluids</i> , <b>2012</b> , 53, 499-517	2.5	20
9	PIV measurements and analysis of transitional flow in a reduced-scale model: Ventilation by a free plane jet with Coanda effect. <i>Building and Environment</i> , <b>2012</b> , 56, 301-313	6.5	43
8	3D CFD simulations of wind flow and wind-driven rain shelter in sports stadia: Influence of stadium geometry. <i>Building and Environment</i> , <b>2011</b> , 46, 22-37	6.5	61
7	A venturi-shaped roof for wind-induced natural ventilation of buildings: Wind tunnel and CFD evaluation of different design configurations. <i>Building and Environment</i> , <b>2011</b> , 46, 1797-1807	6.5	88
6	Computational analysis of the performance of a venturi-shaped roof for natural ventilation: Venturi-effect versus wind-blocking effect. <i>Computers and Fluids</i> , <b>2011</b> , 48, 202-213	2.8	46
5	On the effect of wind direction and urban surroundings on natural ventilation of a large semi-enclosed stadium. <i>Computers and Fluids</i> , <b>2010</b> , 39, 1146-1155	2.8	122
4	Coupled urban wind flow and indoor natural ventilation modelling on a high-resolution grid: A case study for the Amsterdam ArenA stadium. <i>Environmental Modelling and Software</i> , <b>2010</b> , 25, 51-65	5.2	249
3	On the impact of roof geometry on rain shelter in football stadia. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2008</b> , 96, 1274-1293	3.7	17
2	Performance of BIPV modules under different climatic conditions. <i>WEENTECH Proceedings in Energy</i> , <b>2011</b> , 107-115	6.1	1
1	The predicted effect of climate change on indoor overheating of heritage apartments in two different Chinese climate zones. <i>Indoor and Built Environment</i> , <b>2014</b> , 23, 142-158	1.8	0

