Jan Lm Hensen

List of Publications by Citations

147 papers	6,487 citations	46 h-index	77 g-index
159 ext. papers	7,460 ext. citations	5.8 avg, IF	6.45 L-index

#	Paper	IF	Citations
147	User behavior in whole building simulation. *Energy and Buildings*, **2009**, 41, 295-302	7	393
146	Climate adaptive building shells: State-of-the-art and future challenges. *Renewable and Sustainable Energy Reviews*, **2013**, 25, 483-493	16.2	300
145	Uncertainty analysis in building performance simulation for design support. *Energy and Buildings*, **2011**, 43, 2798-2805	7	291
144	Simulation-based decision support tool for early stages of zero-energy building design. *Energy and Buildings*, **2012**, 49, 2-15	7	244
143	Thermal comfort in residential buildings: Comfort values and scales for building energy simulation. *Applied Energy*, **2009**, 86, 772-780	10.7	220
142	Application of computational fluid dynamics in building performance simulation for the outdoor environment: an overview. *Journal of Building Performance Simulation*, **2011**, 4, 157-184	2.8	199
141	Considerations on design optimization criteria for windows providing low energy consumption and high visual comfort. *Applied Energy*, **2012**, 95, 238-245	10.7	189
140	Occupant behavior in building energy simulation: Towards a fit-for-purpose modeling strategy. *Energy and Buildings*, **2016**, 121, 188-204	7	187
139	A performance comparison of multi-objective optimization algorithms for solving nearly-zero-energy-building design problems. *Energy and Buildings*, **2016**, 121, 57-71	7	185
138	Review of external convective heat transfer coefficient models in building energy simulation programs: Implementation and uncertainty. *Applied Thermal Engineering*, **2013**, 56, 134-151	5.8	181
137	Overview of pressure coefficient data in building energy simulation and airflow network programs. *Building and Environment*, **2009**, 44, 2027-2036	6.5	134
136	A new methodology for investigating the cost-optimality of energy retrofitting a building category. *Energy and Buildings*, **2015**, 107, 456-478	7	130
135	Adaptive thermal comfort in primary school classrooms: Creating and validating PMV-based comfort charts. *Building and Environment*, **2011**, 46, 2454-2461	6.5	119
134	Overview of HVAC system simulation. *Automation in Construction*, **2010**, 19, 93-99	9.6	114
133	Evaporative cooling by water spray systems: CFD simulation, experimental validation and sensitivity analysis. *Building and Environment*, **2015**, 83, 129-141	6.5	105
132	Selection criteria for building performance simulation tools: contrasting architectsTand engineersT needs. *Journal of Building Performance Simulation*, **2012**, 5, 155-169	2.8	97
131	Review of current status, requirements and opportunities for building performance simulation of adaptive facades Roel C.G.M. Loonen and Fabio Favoino contributed equally to this work.View all notes. *Journal of Building Performance Simulation*, **2017**, 10, 205-223	2.8	91

130	Multi-criteria decision making under uncertainty in building performance assessment. *Building and Environment*, **2013**, 69, 81-90	6.5	90
129	Integrated building performance simulation: Progress, prospects and requirements. *Building and Environment*, **2015**, 91, 294-306	6.5	87
128	Literature review on thermal comfort in transient conditions. *Building and Environment*, **1990**, 25, 309-316	6.5	85
127	Electrically switchable polymer stabilised broadband infrared reflectors and their potential as smart windows for energy saving in buildings. *Scientific Reports*, **2015**, 5, 11773	4.9	84
126	The indoor environment and the integrated design of homes for older people with dementia. *Building and Environment*, **2010**, 45, 1244-1261	6.5	82
125	Thermal comfort and the integrated design of homes for older people with dementia. *Building and Environment*, **2010**, 45, 358-370	6.5	80
124	Energy and environment in Chinese rural buildings: Situations, challenges, and intervention strategies. *Building and Environment*, **2015**, 91, 271-282	6.5	78
123	State of the art in lighting simulation for building science: a literature review. *Journal of Building Performance Simulation*, **2012**, 5, 209-233	2.8	78
122	Evaluating energy performance in non-domestic buildings: A review. *Energy and Buildings*, **2016**, 128, 734-755	7	77
121	CFD analysis of the impact of physical parameters on evaporative cooling by a mist spray system. *Applied Thermal Engineering*, **2015**, 75, 608-622	5.8	76
120	Quantifying the relevance of adaptive thermal comfort models in moderate thermal climate zones. *Building and Environment*, **2007**, 42, 156-170	6.5	75
119	Analysis of the predicted effect of passive climate adaptation measures on energy demand for cooling and heating in a residential building. *Energy*, **2016**, 94, 811-820	7.9	74
118	The impact of climate change on the overheating risk in dwellingsA Dutch case study. *Building and Environment*, **2017**, 122, 307-323	6.5	74
117	Thermal comfort: research and practice. *Frontiers in Bioscience - Landmark*, **2010**, 15, 765-88	2.8	70
116	User satisfaction and interaction with automated dynamic facades: A pilot study. *Building and Environment*, **2014**, 78, 44-52	6.5	68
115	Framework for assessing the performance potential of seasonally adaptable facades using multi-objective optimization. *Energy and Buildings*, **2014**, 79, 106-113	7	63
114	Thermal comfort of heterogeneous and dynamic indoor conditionsAn overview. *Building and Environment*, **2016**, 109, 82-100	6.5	63
113	Application of broadband infrared reflector based on cholesteric liquid crystal polymer bilayer film to windows and its impact on reducing the energy consumption in buildings. *Journal of Materials Chemistry A*, **2014**, 2, 14622	13	61

112	On occupant-centric building performance metrics. *Building and Environment*, **2017**, 122, 373-385	6.5	59
111	Comfort and performance impact of personal control over thermal environment in summer: Results from a laboratory study. *Building and Environment*, **2015**, 87, 315-326	6.5	58
110	Co-simulation of innovative integrated HVAC systems in buildings. *Journal of Building Performance Simulation*, **2009**, 2, 209-230	2.8	56
109	Simulating the cooling effects of water spray systems in urban landscapes: A computational fluid dynamics study in Rotterdam, The Netherlands. *Landscape and Urban Planning*, **2017**, 159, 85-100	7.7	54
108	Development of surrogate models using artificial neural network for building shell energy labelling. *Energy Policy*, **2014**, 69, 457-466	7.2	54
107	Uncertainty in airflow rate calculations due to the use of surface-averaged pressure coefficients. *Energy and Buildings*, **2010**, 42, 881-888	7	54
106	Ultra-lightweight concrete: Energy and comfort performance evaluation in relation to buildings with low and high thermal mass. *Energy and Buildings*, **2017**, 138, 432-442	7	52
105	Simulation-based support for product development of innovative building envelope components. *Automation in Construction*, **2014**, 45, 86-95	9.6	50
104	Impact of available and perceived control on comfort and health in European offices. *Architectural Science Review*, **2013**, 56, 30-41	2.6	50
103	Energy integration and interaction between buildings and vehicles: A state-of-the-art review. *Renewable and Sustainable Energy Reviews*, **2019**, 114, 109337	16.2	46
102	CFD analysis of forced convective heat transfer coefficients at windward building facades: Influence of building geometry. *Journal of Wind Engineering and Industrial Aerodynamics*, **2015**, 146, 102-116	3.7	46
101	Investigating the potential of a novel low-energy house concept with hybrid adaptable thermal storage. *Energy Conversion and Management*, **2011**, 52, 2442-2447	10.6	42
100	Embodied energy of building materials and green building rating systems□A case study for industrial halls. *Sustainable Cities and Society*, **2011**, 1, 67-71	10.1	40
99	On the predicted effectiveness of climate adaptation measures for residential buildings. *Building and Environment*, **2014**, 82, 300-316	6.5	38
98	Reprint of: On the predicted effectiveness of climate adaptation measures for residential buildings. *Building and Environment*, **2015**, 83, 142-158	6.5	37
97	Cross-ventilation in a generic isolated building equipped with louvers: Wind-tunnel experiments and CFD simulations. *Building and Environment*, **2019**, 154, 263-280	6.5	36
96	Analysis of control strategies for thermally activated building systems under demand side management mechanisms. *Energy and Buildings*, **2014**, 80, 384-393	7	36
95	International survey on current occupant modelling approaches in building performance simulation□□Isabella Gaetani, Sara Gilani, and Salvatore Carlucci contributed equally to this work.View all notes. *Journal of Building Performance Simulation*, **2017**, 10, 653-671	2.8	36

94	A methodology for performance robustness assessment of low-energy buildings using scenario analysis. *Applied Energy*, **2018**, 212, 428-442	10.7	33
93	Estimating the influence of occupant behavior on building heating and cooling energy in one simulation run. *Applied Energy*, **2018**, 223, 159-171	10.7	33
92	The potential of lightweight low-energy houses with hybrid adaptable thermal storage: Comparing the performance of promising concepts. *Energy and Buildings*, **2016**, 110, 79-93	7	33
91	An investigation of the option space in conceptual building design for advanced building simulation. *Advanced Engineering Informatics*, **2009**, 23, 386-395	7.4	33
90	Co-simulation for performance prediction of integrated building and HVAC systems An analysis of solution characteristics using a two-body system. *Simulation Modelling Practice and Theory*, **2010**, 18, 957-970	3.9	33
89	Building Performance Simulation for Design and Operation		33
88	On the Application of Uncertainty and Sensitivity Analysis with Abstract Building Performance Simulation Tools. *Journal of Building Physics*, **2009**, 33, 5-27	2.6	32
87	Multi-year and reference year weather data for building energy labelling in north Italy climates. *Energy and Buildings*, **2014**, 72, 62-72	7	31
86	Achieving informed decision-making for net zero energy buildings design using building performance simulation tools. *Building Simulation*, **2013**, 6, 3-21	3.9	28
85	Application of large underground seasonal thermal energy storage in district heating system: A model-based energy performance assessment of a pilot system in Chifeng, China. *Applied Thermal Engineering*, **2018**, 137, 319-328	5.8	27
84	Thermal comfort and older adults. *Gerontechnology*, **2006**, 4,	1.5	27
83	Investigating the potential of a closed-loop dynamic insulation system for opaque building elements. *Energy and Buildings*, **2018**, 173, 409-427	7	24
82	Heating and cooling energy demand in underground buildings: Potential for saving in various climates and functions. *Energy and Buildings*, **2014**, 71, 129-136	7	24
81	The ventilation needed to control thermal plume and particle dispersion from manikins in a unidirectional ventilated protective isolation room. *Building Simulation*, **2015**, 8, 551-565	3.9	23
80	Assessing the accuracy of a simplified building energy simulation model using BESTEST: The case study of Brazilian regulation. *Energy and Buildings*, **2012**, 45, 219-228	7	23
79	On the applicability of the laminar flow index when selecting surgical lighting. *Building and Environment*, **2010**, 45, 1976-1983	6.5	23
78	Lift-off of Free-standing Layers in the Kerfless Porous Silicon Process. *Energy Procedia*, **2013**, 38, 919-925	2.3	22
77	Modelling and simulation of a jet fan for controlled air flow in large enclosures. *Environmental Modelling and Software*, **2011**, 26, 191-200	5.2	22

76	Mapping failures in energy and environmental performance of buildings. *Energy and Buildings*, **2018**, 158, 476-485	7	21
75	Building energy simulation and optimization: A case study of industrial halls with varying process loads and occupancy patterns. *Building Simulation*, **2014**, 7, 229-236	3.9	21
74	Analysis and improvement of the representativeness of EN ISO 15927-4 reference years for building energy simulation. *Journal of Building Performance Simulation*, **2014**, 7, 391-410	2.8	21
73	Occupant behavior in identical residential buildings: A case study for occupancy profiles extraction and application to building performance simulation. *Building Simulation*, **2019**, 12, 1047-1061	3.9	19
72	Heuristic battery-protective strategy for energy management of an interactive renewables Buildings Vehicles energy sharing network with high energy flexibility. *Energy Conversion and Management*, **2020**, 214, 112891	10.6	18
71	Opportunities and pitfalls of using building performance simulation in explorative R&D contexts. *Journal of Building Performance Simulation*, **2019**, 12, 272-288	2.8	16
70	Testing the effectiveness of operating room ventilation with regard to removal of airborne bacteria. *Building and Environment*, **2011**, 46, 2570-2577	6.5	16
69	Energy flexibility potential of a small district connected to a district heating system. *Energy and Buildings*, **2020**, 225, 110074	7	16
68	Large-scale living laboratory of seasonal borehole thermal energy storage system for urban district heating. *Applied Energy*, **2020**, 264, 114763	10.7	15
67	High-quality Exfoliated Crystalline Silicon Foils for Solar Cell Applications. *Energy Procedia*, **2014**, 55, 570-577	2.3	15
66	A stepwise approach for assessing the appropriate occupant behaviour modelling in building performance simulation. *Journal of Building Performance Simulation*, **2020**, 13, 362-377	2.8	14
65	Lifecycle cost and CO2 emissions of residential heat and electricity prosumers in Finland and the Netherlands. *Energy Conversion and Management*, **2018**, 160, 495-508	10.6	14
64	Full-factorial design space exploration approach for multi-criteria decision making of the design of industrial halls. *Energy and Buildings*, **2016**, 117, 352-361	7	14
63	Downdraught assessment during design: Experimental and numerical evaluation of a rule of thumb. *Building and Environment*, **2012**, 57, 290-301	6.5	14
62	Simulation for better building design. *Building and Environment*, **2004**, 39, 875-877	6.5	14
61	The solar noise barrier project 4: Modeling of full-scale luminescent solar concentrator noise barrier panels. *Renewable Energy*, **2020**, 151, 1141-1149	8.1	14
60	4.5 ms Effective Carrier Lifetime in Kerfless Epitaxial Silicon Wafers From the Porous Silicon Process. *IEEE Journal of Photovoltaics*, **2017**, 7, 430-436	3.7	13
59	Performance simulation for better building design. *Energy and Buildings*, **2004**, 36, 735-736	7	13

58	On the sensitivity to different aspects of occupant behaviour for selecting the appropriate modelling complexity in building performance predictions. *Journal of Building Performance Simulation*, **2017**, 10, 601-611	2.8	12
57	Building performance robustness assessment: Comparative study and demonstration using scenario analysis. *Energy and Buildings*, **2019**, 202, 109362	7	12
56	Kerfless exfoliated thin crystalline Si wafers with Al metallization layers for solar cells. *Journal of Materials Research*, **2015**, 30, 3227-3240	2.5	12
55	A central solar-industrial waste heat heating system with large scale borehole thermal storage. *Procedia Engineering*, **2017**, 205, 1584-1591		11
54	Data-driven inference of unknown tilt and azimuth of distributed PV systems. *Solar Energy*, **2020**, 211, 418-432	6.8	11
53	Fire safety assessment of semi-open car parks based on validated CFD simulations. *Building Simulation*, **2013**, 6, 385-394	3.9	10
52	Personal control over temperature in winter in Dutch office buildings. *HVAC and R Research*, **2013**, 19, 1033-1050		10
51	Assessing the performance potential of climate adaptive greenhouse shells. *Energy*, **2019**, 175, 534-545	7.9	9
50	An inverse modeling approach for the thermal response modeling of green façades. *Applied Energy*, **2019**, 235, 1447-1456	10.7	9
49	An optimization method for the distance between exits of buildings considering uncertainties based on arbitrary polynomial chaos expansion. *Reliability Engineering and System Safety*, **2016**, 154, 188-196	6.3	8
48	AN Approach to the Simulation of Coupled Heat and Mass Flows in Buildings. *Indoor Air*, **1991**, 1, 283-296	5.4	8
47	Simulation-based assessment of data center waste heat utilization using aquifer thermal energy storage of a university campus. *Building Simulation*, **2020**, 13, 823-836	3.9	7
46	Analysis of Various Opening Configurations of a Second-Generation Virtual Natural Lighting Solutions Prototype. *LEUKOS - Journal of Illuminating Engineering Society of North America*, **2014**, 10, 223-236	3.5	7
45	Simulation of virtual natural lighting solutions with a simplified view. *Lighting Research and Technology*, **2014**, 46, 198-218	2	7
44	Integrating robustness indicators into multi-objective optimization to find robust optimal low-energy building designs. *Journal of Building Performance Simulation*, **2019**, 12, 546-565	2.8	7
43	An unsupervised method for identifying local PV shading based on AC power and regional irradiance data. *Solar Energy*, **2018**, 174, 1068-1077	6.8	7
42	Reuse of Substrate Wafers for the Porous Silicon Layer Transfer. *IEEE Journal of Photovoltaics*, **2016**, 6, 783-790	3.7	6
41	Directional Heating and Cooling for Controlled Spalling. *IEEE Journal of Photovoltaics*, **2015**, 5, 195-201	3.7	6

40	Distributed Building Performance Simulation: A Novel Approach to Overcome Legacy Code Limitations. *HVAC and R Research*, **2006**, 12, 621-640		6
39	Towards an integral approach of building and HVAC system. *Energy and Buildings*, **1993**, 19, 297-302	7	6
38	Thermal comfort optimisation of vernacular rural buildings: passive solutions to retrofit a typical farmhouse in central Italy. *Journal of Agricultural Engineering*, **2017**, 48, 127	1.3	5
37	Selecting an appropriate tool for airflow simulation in buildings. *Building Services Engineering Research and Technology*, **2004**, 25, 269-278	2.3	5
36	Investigating the energy saving potential of thermochromic coatings on building envelopes. *Applied Energy*, **2021**, 291, 116788	10.7	5
35	Simulation-aided development of automated solar shading control strategies using performance mapping and statistical classification. *Journal of Building Performance Simulation*,1-23	2.8	5
34	9 ms carrier lifetime in kerfless epitaxial wafers by n-type POLO gettering **2018**,		5
33	Multi-state vertical-blinds solar shading : Performance assessment and recommended development directions. *Journal of Building Engineering*, **2021**, 40, 102743	5.2	5
32	Rooftop photovoltaic (PV) systems: a cost–benefit analysis study of industrial halls. *International Journal of Low-Carbon Technologies*, **2014**, 9, 319-326	2.8	4
31	Energy simulation of displacement ventilation in offices. *Building Services Engineering Research and Technology*, **1995**, 16, 77-81	2.3	4
30	Investigating the energy flexibility of Dutch office buildings on single building level and building cluster level. *Journal of Building Engineering*, **2021**, 40, 102687	5.2	4
29	Moisture-participating MOF thermal battery for heat reallocation between indoor environment and building-integrated photovoltaics. *Nano Energy*, **2021**, 87, 106224	17.1	4
28	Simulation-based design optimization of houses with low grid dependency. *Renewable Energy*, **2020** , 157, 1185-1202	8.1	3
27	Kerfless epitaxial silicon wafers with 7 ms carrier lifetimes and a wide lift-off process window. *Japanese Journal of Applied Physics*, **2018**, 57, 041301	1.4	3
26	Thermomechanical Spalling of Epitaxially Grown Silicon from Porosified Substrates. *Energy Procedia* , **2016**, 92, 873-879	2.3	3
25	Comparison between lighting performance of a virtual natural lighting solutions prototype and a real window based on computer simulation. *Frontiers of Architectural Research*, **2014**, 3, 398-412	2.3	3
24	Building and Environmental Performance Simulation: Current State and Future Issues. *Building and Environment*, **2001**, 36, 671-672	6.5	3
23	Lifetime Analysis for Defect Characterization in Kerfless Epitaxial Silicon from the Porous Silicon Process. *Energy Procedia*, **2016**, 92, 29-36	2.3	3

22	Computational performance analysis of overheating mitigation measures in parked vehicles. *Applied Energy*, **2018**, 231, 635-644	10.7	3
21	Calculating solar irradiance without shading geometry: a point cloud-based method. *Journal of Building Performance Simulation*, **2021**, 14, 480-502	2.8	3
20	Investigating energy performance of large-scale seasonal storage in the district heating system of chifeng city: Measurements and model-based analysis of operation strategies. *Energy and Buildings*, **2021**, 247, 111113	7	3
19	Developing a Risk Indicator to Quantify Robust Building Design. *Energy Procedia*, **2015**, 78, 1895-1900	2.3	2
18	Future-Proof Energy-Retrofit Strategy for an Existing Dutch Neighbourhood. *Energy and Buildings*, **2022**, 260, 111914	7	2
17	Energy saving renovation: analysis of critical factors at the building level **2008**,		2
16	An Arbitrary Polynomial Chaos-Based Approach to Analyzing the Impacts of Design Parameters on Evacuation Time under Uncertainty. *Fire Safety Science*, **2014**, 11, 1077-1090		2
15	Angle-dependent optical properties of advanced fenestration systems□finding a right balance between model complexity and prediction error. *Building Simulation*, **2019**, 12, 113-127	3.9	2
14	Design Optimisation of Fixed and Adaptive Shading Devices on Four Fa□de Orientations of a High-Rise Office Building in the Tropics. *Buildings*, **2022**, 12, 25	3.2	2
13	Empirical model predicting the layer thickness and porosity of p-type mesoporous silicon. *Semiconductor Science and Technology*, **2017**, 32, 045007	1.8	1
12	Modelling and simulation of virtual natural lighting solutions with complex views. *Building Simulation*, **2014**, 7, 563-578	3.9	1
11	Numerical modelling and validation of thermally-induced spalling. *Energy Procedia*, **2015**, 77, 855-862	2.3	1
10	Infrared reflector based on liquid crystal polymers and its impact on thermal comfort conditions in buildings **2014**,		1
9	Rooftop photovoltaic (PV) systems for industrial halls: Achieving economic benefit via lowering energy demand. *Frontiers of Architectural Research*, **2012**, 1, 326-333	2.3	1
8	A prospect to develop thermally robust outline design and to explore its applicability to the different climate necessities of Turkey. *International Journal of Low-Carbon Technologies*, **2011**, 6, 76-85	2.8	1
7	Low Energy Cooling of Buildings in Central Europe - Case Studies. *International Journal of Ventilation*, **2008**, 7, 11-21	1.1	1
6	Energy flexibility assessment of a zero-energy office building with building thermal mass in short-term demand-side management. *Journal of Building Engineering*, **2022**, 104214	5.2	1
5	Towards simulation-assisted performance monitoring of BIPV systems considering shading effects **2016**,		1

4	Nomograms for de-complexing the dimensioning of off-grid PV systems. *Renewable Energy*, **2020**, 161, 162-172	8.1	0
3	Why Integral Design of Building and Systems? **1990**, 490-492		
2	Design Support Via Simulation of Building and Plant Thermal Interaction **1993**, 227-238		
1	Simulation of Spalling with a Non-planar Bi-layered Interface Due to the Reuse of the Substrate. *Energy Procedia*, **2016**, 92, 764-772	2.3	