William O Brien

List of Publications by Year in Descending Order

112 papers	3,090 citations	31 h-index	53 g-index
127 ext. papers	3,724 ext. citations	4.7 avg, IF	6.18 L-index

#	Paper	IF	Citations
112	Fit-for-purpose: Measuring occupancy to support commercial building operations: A review. *Building and Environment*, **2022**, 212, 108767	6.5	2
111	A review of common human errors in design, installation, and operation of multiple-zone VAV AHU systems. *Journal of Physics: Conference Series*, **2021**, 2042, 012130	0.3	0
110	A preliminary scenario analysis of the impacts of teleworking on energy consumption and greenhouse gas (GHG) emissions. *Journal of Physics: Conference Series*, **2021**, 2069, 012077	0.3	
109	Living labs as an opportunity for experiential learning in building engineering education. *Advanced Engineering Informatics*, **2021**, 50, 101440	7.4	0
108	Benchmarking and visualization of building portfolios by applying text analytics to maintenance work order logs. *Science and Technology for the Built Environment*, **2021**, 27, 756-775	1.8	2
107	A data-driven study of thermostat overrides during demand response events. *Energy Policy*, **2021**, 153, 112290	7.2	4
106	Natural ventilation usability under climate change in Canada and the United States. *Building Research and Information*, **2021**, 49, 367-386	4.3	2
105	Is anyone home? A critical review of occupant-centric smart HVAC controls implementations in residential buildings. *Building and Environment*, **2021**, 187, 107369	6.5	9
104	Proxy zone-level energy use estimation in a commercial building with a variable air volume system. *Journal of Building Engineering*, **2021**, 33, 101498	5.2	
103	An occupant-centric method for window and shading design optimization in office buildings. *Science and Technology for the Built Environment*, **2021**, 27, 181-194	1.8	1
102	Exploring smart thermostat users schedule override behaviors and the energy consequences. *Science and Technology for the Built Environment*, **2021**, 27, 195-210	1.8	6
101	Quantifying the impact of occupants spatial distributions on office buildings energy and comfort performance. *Energy and Buildings*, **2021**, 233, 110695	7	5
100	The in-situ implementation of a feature-rich thermostat: A building engineering and human factors approach to improve perceived control in offices. *Building and Environment*, **2021**, 199, 107884	6.5	4
99	Current state and future challenges in building management: Practitioner interviews and a literature review. *Journal of Building Engineering*, **2021**, 41, 102803	5.2	2
98	New Insights on the Energy Impacts of Telework in Canada. *Canadian Public Policy/ Analyse De Politiques*, **2021**, 47, 460-477	2.5	4
97	Residential thermostat usability: Comparing manual, programmable, and smart devices. *Building and Environment*, **2021**, 203, 108104	6.5	2
96	Development and evaluation of data-driven controls for residential smart thermostats. *Energy and Buildings*, **2021**, 249, 111201	7	2

95	The impact of the COVID-19 on households' hourly electricity consumption in Canada.. *Energy and Buildings*, **2021**, 250, 111280	7	11
94	Inverse model-based virtual sensors for detection of hard faults in air handling units. *Energy and Buildings*, **2021**, 253, 111493	7	4
93	A comprehensive simulation-based assessment of office building performance adaptability to teleworking scenarios in different Canadian climate zones.. *Building Simulation*, **2021**, 15, 1-20	3.9	1
92	An international review of occupant-related aspects of building energy codes and standards. *Building and Environment*, **2020**, 179, 106906	6.5	38
91	A review of select human-building interfaces and their relationship to human behavior, energy use and occupant comfort. *Building and Environment*, **2020**, 178, 106920	6.5	44
90	C-HVAC **2020**,		1
89	Introducing IEA EBC annex 79: Key challenges and opportunities in the field of occupant-centric building design and operation. *Building and Environment*, **2020**, 178, 106738	6.5	62
88	Optimization of electricity use in office buildings under occupant uncertainty. *Journal of Building Performance Simulation*, **2020**, 13, 13-25	2.8	2
87	A field study on the effect of building automation on perceived comfort and control in institutional buildings. *Architectural Science Review*, **2020**, 63, 74-86	2.6	8
86	Listen to the guests: Text-mining Airbnb reviews to explore indoor environmental quality. *Building and Environment*, **2020**, 169, 106555	6.5	15
85	Spatially and temporally sensitive consumption-based emission factors from mixed-use electrical grids for building electrical use. *Energy and Buildings*, **2020**, 224, 110249	7	4
84	Simulation-aided occupant-centric building design: A critical review of tools, methods, and applications. *Energy and Buildings*, **2020**, 224, 110292	7	22
83	A simulation framework for predicting occupant thermal sensation in perimeter zones of buildings considering direct solar radiation and ankle draft. *Building and Environment*, **2020**, 183, 107096	6.5	7
82	Comparative review of occupant-related energy aspects of the National Building Code of Canada. *Building and Environment*, **2020**, 183, 107136	6.5	5
81	Does telecommuting save energy? A critical review of quantitative studies and their research methods. *Energy and Buildings*, **2020**, 225, 110298	7	31
80	A review of data collection and analysis requirements for certified green buildings. *Energy and Buildings*, **2020**, 226, 110367	7	8
79	Simulating energy savings potential with high-resolution daylight and occupancy sensing in open-plan offices. *Journal of Building Performance Simulation*, **2020**, 13, 606-619	2.8	2
78	Seeing is believing: an innovative approach to post-occupancy evaluation. *Energy Efficiency*, **2020**, 13, 473-486	3	6

77	A critical review of field implementations of occupant-centric building controls. *Building and Environment*, **2019**, 165, 106351	6.5	78
76	Get the picture? Lessons learned from a smartphone-based post-occupancy evaluation. *Energy Research and Social Science*, **2019**, 56, 101224	7.7	7
75	Towards occupant-centric simulation-aided building design: a case study. *Building Research and Information*, **2019**, 47, 866-882	4.3	26
74	Exploring the impact of office building users' modeling approaches on energy use across Canadian climates. *Energy and Buildings*, **2019**, 197, 68-86	7	6
73	Comparison of machine learning models for occupancy prediction in residential buildings using connected thermostat data. *Building and Environment*, **2019**, 160, 106177	6.5	42
72	Experimental application of classification learning to generate simplified model predictive controls for a shared office heating system. *Science and Technology for the Built Environment*, **2019**, 25, 615-628	1.8	4
71	Sensitivity analysis and optimization of building operations. *Energy and Buildings*, **2019**, 199, 164-175	7	21
70	A review of factors affecting occupant comfort in multi-unit residential buildings. *Building and Environment*, **2019**, 160, 106182	6.5	64
69	Development and implementation of automated fault detection and diagnostics for building systems: A review. *Automation in Construction*, **2019**, 104, 215-229	9.6	41
68	A method to generate design-sensitive occupant-related schedules for building performance simulations. *Science and Technology for the Built Environment*, **2019**, 25, 221-232	1.8	9
67	Do building energy codes adequately reward buildings that adapt to partial occupancy?. *Science and Technology for the Built Environment*, **2019**, 25, 678-691	1.8	14
66	A probabilistic approach toward achieving net-zero energy buildings using a stochastic office tenant model. *Science and Technology for the Built Environment*, **2019**, 25, 743-752	1.8	1
65	On quantifying building performance adaptability to variable occupancy. *Building and Environment*, **2019**, 155, 257-267	6.5	19
64	Critical review and illustrative examples of office occupant modelling formalisms. *Building Services Engineering Research and Technology*, **2019**, 40, 732-757	2.3	15
63	Usability and comfort in Canadian offices: Interview of 170 university employees. *IOP Conference Series: Materials Science and Engineering*, **2019**, 609, 042091	0.4	1
62	A method to conduct longitudinal studies on indoor environmental quality and perceived occupant comfort. *Building and Environment*, **2019**, 150, 88-98	6.5	26
61	Development of an office tenant electricity use model and its application for right-sizing HVAC equipment. *Journal of Building Performance Simulation*, **2019**, 12, 37-55	2.8	12
60	Sequential state prediction and parameter estimation with constrained dual extended Kalman filter for building zone thermal responses. *Energy and Buildings*, **2019**, 183, 538-546	7	11

59	Development and visualization of time-based building energy performance metrics. *Building Research and Information*, **2019**, 47, 493-517	4.3	9
58	Improving occupant-related features in building performance simulation tools. *Building Simulation*, **2018**, 11, 803-817	3.9	16
57	Simulating occupants' impact on building energy performance at different spatial scales. *Building and Environment*, **2018**, 132, 327-337	6.5	41
56	Development and implementation of a thermostat learning algorithm. *Science and Technology for the Built Environment*, **2018**, 24, 43-56	1.8	36
55	A longitudinal study of thermostat behaviors based on climate, seasonal, and energy price considerations using connected thermostat data. *Building and Environment*, **2018**, 139, 199-210	6.5	41
54	Energy and comfort performance benefits of early detection of building sensor and actuator faults. *Building Services Engineering Research and Technology*, **2018**, 39, 652-666	2.3	11
53	Occupancy and Occupants□Actions **2018**, 7-38		10
52	Sensing and Data Acquisition **2018**, 77-105		9
51	Introduction to Occupant Research Approaches **2018**, 107-127		2
50	In Situ Approaches to Studying Occupants **2018**, 129-167		2
49	Building energy model reduction using model-cluster-reduce pipeline. *Journal of Building Performance Simulation*, **2018**, 11, 553-567	2.8	9
48	A preliminary study of occupants□use of manual lighting controls in private offices: A case study. *Energy and Buildings*, **2018**, 159, 572-586	7	30
47	Development of Sankey diagrams to visualize real HVAC performance. *Energy and Buildings*, **2017**, 149, 282-297	7	13
46	A preliminary study of representing the inter-occupant diversity in occupant modelling. *Journal of Building Performance Simulation*, **2017**, 10, 509-526	2.8	49
45	Data visualization and analysis of energy flow on a multi-zone building scale. *Automation in Construction*, **2017**, 84, 258-273	9.6	28
44	Office building plug and light loads: Comparison of a multi-tenant office tower to conventional assumptions. *Energy and Buildings*, **2017**, 153, 461-475	7	16
43	Oh behave! Survey stories and lessons learned from building occupants in high-performance buildings. *Energy Research and Social Science*, **2017**, 31, 11-20	7.7	49
42	On occupant-centric building performance metrics. *Building and Environment*, **2017**, 122, 373-385	6.5	59

41	Review of current methods, opportunities, and challenges for in-situ monitoring to support occupant modelling in office spaces. *Journal of Building Performance Simulation*, **2017**, 10, 444-470	2.8	44
40	International survey on current occupant modelling approaches in building performance simulationIsabella 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
39	Development and implementation of an adaptive lighting and blinds control algorithm. *Building and Environment*, **2017**, 113, 185-199	6.5	98
38	Field study of thermal comfort and occupant satisfaction in Canadian condominiums. *Architectural Science Review*, **2017**, 60, 27-39	2.6	19
37	Model-based predictive control of office window shades. *Building Research and Information*, **2016**, 44, 445-455	4.3	18
36	Implementation and comparison of existing occupant behaviour models in EnergyPlus. *Journal of Building Performance Simulation*, **2016**, 9, 567-588	2.8	56
35	Use of dynamic occupant behavior models in the building design and code compliance processes. *Energy and Buildings*, **2016**, 117, 260-271	7	35
34	Development and implementation of control-oriented models for terminal heating and cooling units. *Energy and Buildings*, **2016**, 121, 78-91	7	7
33	Modeling plug-in equipment load patterns in private office spaces. *Energy and Buildings*, **2016**, 121, 234-249	7	45
32	Control-oriented inverse modeling of the thermal characteristics in an office. *Science and Technology for the Built Environment*, **2016**, 22, 586-605	1.8	15
31	Comfort considerations in Net ZEBs: theory and design **2015**, 75-106		2
30	Development of an occupancy learning algorithm for terminal heating and cooling units. *Building and Environment*, **2015**, 93, 71-85	6.5	44
29	Occupant behavior modeling for building performance simulation: Current state and future challenges. *Energy and Buildings*, **2015**, 107, 264-278	7	477
28	Visualization of energy and water consumption and GHG emissions: A case study of a Canadian University Campus. *Energy and Buildings*, **2015**, 109, 334-352	7	22
27	Mitigating office performance uncertainty of occupant use of window blinds and lighting using robust design. *Building Simulation*, **2015**, 8, 621-636	3.9	39
26	Building performance optimization of net zero-energy buildings **2015**, 175-206		7
25	Net ZEB case studies **2015**, 241-350		
24	Modeling and design of Net ZEBs as integrated energy systems **2015**, 9-74		

23	Net ZEB design processes and tools **2015**, 107-174		2
22	Load matching, grid interaction, and advanced control **2015**, 207-240		2
21	Conclusion, research needs, and future directions **2015**, 351-354		
20	The contextual factors contributing to occupants' adaptive comfort behaviors in offices A review and proposed modeling framework. *Building and Environment*, **2014**, 77, 77-87	6.5	161
19	On the behavioral effects of residential electricity submetering in a heating season. *Building and Environment*, **2014**, 81, 396-403	6.5	33
18	Shortest-prediction-horizon model-based predictive control for individual offices. *Building and Environment*, **2014**, 82, 408-419	6.5	33
17	Coupling stochastic occupant models to building performance simulation using the discrete event system specification formalism. *Journal of Building Performance Simulation*, **2014**, 7, 457-478	2.8	39
16	On adaptive occupant-learning window blind and lighting controls. *Building Research and Information*, **2014**, 42, 739-756	4.3	53
15	A critical review of observation studies, modeling, and simulation of adaptive occupant behaviors in offices. *Building and Environment*, **2013**, 70, 31-47	6.5	173
14	Manually-operated window shade patterns in office buildings: A critical review. *Building and Environment*, **2013**, 60, 319-338	6.5	150
13	Assessing gaps and needs for integrating building performance optimization tools in net zero energy buildings design. *Energy and Buildings*, **2013**, 60, 110-124	7	253
12	Thermal zoning and interzonal airflow in the design and simulation of solar houses: a sensitivity analysis. *Journal of Building Performance Simulation*, **2011**, 4, 239-256	2.8	23
11	The Relationship between Net Energy Use and the Urban Density of Solar Buildings. *Environment and Planning B: Planning and Design*, **2010**, 37, 1002-1021		41
10	A workflow for evaluating occupant-centric controls using building simulation. *Journal of Building Performance Simulation*,1-19	2.8	2
9	Investigation of occupant-related energy aspects of the National Building Code of Canada: Energy use impact and potential least-cost code-compliant upgrades. *Science and Technology for the Built Environment*,1-19	1.8	0
8	Evaluation of data-driven thermal models for multi-hour predictions using residential smart thermostat data. *Journal of Building Performance Simulation*,1-20	2.8	2
7	Case study: A survey of perceived noise in Canadian multi-unit residential buildings to study long-term implications for widespread teleworking. *Building Acoustics*,1351010X2199374	1	9
6	Some evidence of a time-varying thermal perception. *Indoor and Built Environment*,1420326X2110345	1.8	1

5	Exploring the adequacy of mechanical ventilation for acceptable indoor air quality in office buildings. *Science and Technology for the Built Environment*,1-17	1.8	1
4	Toward a standardized framework for thermal resilience modelling and its practical application to futureproofing. *Science and Technology for the Built Environment*,1-15	1.8	
3	A data-driven workflow to improve energy efficient operation of commercial buildings: A review with real-world examples. *Building Services Engineering Research and Technology*,014362442110696	2.3	0
2	A Methodology to Integrate Maintenance Management Systems and BIM to Improve Building Management. *Science and Technology for the Built Environment*,1-20	1.8	1
1	Impact of measured data frequency on commercial building energy model calibration for retrofit analysis. *Science and Technology for the Built Environment*,1-17	1.8	0