

Elie Azar

List of Publications by Year in descending order

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73
papers

2,200
citations

220726

26
h-index

225422

46
g-index

76
all docs

76
docs citations

76
times ranked

1802
citing authors

#	ARTICLE	IF	CITATIONS
1	Agent-Based Modeling of Occupants and Their Impact on Energy Use in Commercial Buildings. Journal of Computing in Civil Engineering, 2012, 26, 506-518.	4.8	197
2	A comprehensive analysis of the impact of occupancy parameters in energy simulation of office buildings. Energy and Buildings, 2012, 55, 841-853.	6.7	196
3	Review of multi-domain approaches to indoor environmental perception and behaviour. Building and Environment, 2020, 176, 106804.	7.0	127
4	A systematic review of occupant behavior in building energy policy. Building and Environment, 2020, 175, 106807.	7.0	105
5	Rethinking HVAC temperature setpoints in commercial buildings: The potential for zero-cost energy savings and comfort improvement in different climates. Building and Environment, 2019, 155, 350-359.	7.0	103
6	A comprehensive framework to quantify energy savings potential from improved operations of commercial building stocks. Energy Policy, 2014, 67, 459-472.	8.8	85
7	Evaluation of tree-based ensemble learning algorithms for building energy performance estimation. Journal of Building Performance Simulation, 2018, 11, 322-332.	2.1	77
8	Multilayer thin film structures for multifunctional glass: Self-cleaning, antireflective and energy-saving properties. Applied Energy, 2020, 264, 114697.	10.2	74
9	Evaluating assumptions of scales for subjective assessment of thermal environments "Do laypersons perceive them the way, we researchers believe?". Energy and Buildings, 2020, 211, 109761.	6.7	68
10	An applied framework to evaluate the impact of indoor office environmental factors on occupants'™ comfort and working conditions. Sustainable Cities and Society, 2019, 46, 101447.	10.5	65
11	Framework to investigate energy conservation motivation and actions of building occupants: The case of a green campus in Abu Dhabi, UAE. Applied Energy, 2017, 190, 563-573.	10.2	59
12	An international review of occupant-related aspects of building energy codes and standards. Building and Environment, 2020, 179, 106906.	7.0	59
13	Simulation-aided occupant-centric building design: A critical review of tools, methods, and applications. Energy and Buildings, 2020, 224, 110292.	6.7	56
14	Integrating building performance simulation in agent-based modeling using regression surrogate models: A novel human-in-the-loop energy modeling approach. Energy and Buildings, 2016, 128, 214-223.	6.7	53
15	Integrating and optimizing metrics of sustainable building performance using human-focused agent-based modeling. Applied Energy, 2016, 183, 926-937.	10.2	52
16	A data-driven analysis of building energy use with emphasis on operation and maintenance: A case study from the UAE. Journal of Cleaner Production, 2018, 192, 169-178.	9.4	48
17	Framework to Evaluate Energy-Saving Potential from Occupancy Interventions in Typical Commercial Buildings in the United States. Journal of Computing in Civil Engineering, 2014, 28, 63-78.	4.8	46
18	The Role of Occupants in Buildings'™ Energy Performance Gap: Myth or Reality?. Sustainability, 2021, 13, 3146.	3.3	46

#	ARTICLE	IF	CITATIONS
19	Occupant-centric miscellaneous electric loads prediction in buildings using state-of-the-art deep learning methods. <i>Applied Energy</i> , 2020, 269, 115135.	10.2	43
20	Techno-economic analysis of energy storage systems using reversible fuel cells and rechargeable batteries in green buildings. <i>Energy</i> , 2022, 247, 123466.	8.9	39
21	Occupant behavior modeling methods for resilient building design, operation and policy at urban scale: A review. <i>Applied Energy</i> , 2021, 293, 116856.	10.2	37
22	Evaluating the electricity saving potential of electrochromic glazing for cooling and lighting at the scale of the Swiss non-residential national building stock using a Monte Carlo model. <i>Energy</i> , 2019, 185, 136-147.	8.9	34
23	Evaluating the impact of extreme energy use behavior on occupancy interventions in commercial buildings. <i>Energy and Buildings</i> , 2015, 97, 205-218.	6.7	33
24	A Global Building Occupant Behavior Database. <i>Scientific Data</i> , 2022, 9, .	5.4	31
25	Conceptual Framework to Optimize Building Energy Consumption by Coupling Distributed Energy Simulation and Occupancy Models. <i>Journal of Computing in Civil Engineering</i> , 2014, 28, 50-62.	4.8	28
26	Multilayer Agent-Based Modeling and Social Network Framework to Evaluate Energy Feedback Methods for Groups of Buildings. <i>Journal of Computing in Civil Engineering</i> , 2017, 31, .	4.8	28
27	Economics of the Li-ion batteries and reversible fuel cells as energy storage systems when coupled with dynamic electricity pricing schemes. <i>Energy</i> , 2022, 239, 121941.	8.9	28
28	Immersive virtual environments for occupant comfort and adaptive behavior research – A comprehensive review of tools and applications. <i>Building and Environment</i> , 2022, 207, 108396.	7.0	26
29	Impact of Human Actions on Building Energy Performance: A Case Study in the United Arab Emirates (UAE). <i>Sustainability</i> , 2018, 10, 1404.	3.3	21
30	Ten questions concerning agent-based modeling of occupant behavior for energy and environmental performance of buildings. <i>Building and Environment</i> , 2022, 217, 109016.	7.0	20
31	Modeling and implementing human-based energy retrofits in a green building in desert climate. <i>Energy and Buildings</i> , 2018, 173, 71-80.	6.7	19
32	The Scales Project, a cross-national dataset on the interpretation of thermal perception scales. <i>Scientific Data</i> , 2019, 6, 289.	5.4	19
33	Exploring drivers of patient satisfaction using a random forest algorithm. <i>BMC Medical Informatics and Decision Making</i> , 2021, 21, 157.	3.0	19
34	Optimizing the Performance of Energy-Intensive Commercial Buildings: Occupancy-Focused Data Collection and Analysis Approach. <i>Journal of Computing in Civil Engineering</i> , 2016, 30, .	4.8	18
35	Recession Effects in United States Public Sector Construction Contracting: Focus on the American Recovery and Reinvestment Act of 2009. <i>Journal of Management in Engineering - ASCE</i> , 2012, 28, 354-361.	4.9	17
36	Effect of densification and compactness on urban building energy consumption: Case of a Transit-Oriented Development in Dallas, TX. <i>Sustainable Cities and Society</i> , 2020, 56, 101987.	10.5	17

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37	Day-ahead prediction of plug-in loads using a long short-term memory neural network. Energy and Buildings, 2021, 234, 110667.	6.7	15
38	A guideline to document occupant behavior models for advanced building controls. Building and Environment, 2022, 219, 109195.	7.0	15
39	A conceptual framework to energy estimation in buildings using agent based modeling. , 2010, , .		13
40	Drivers of energy consumption in Kuwaiti buildings: Insights from a hybrid statistical and building performance simulation approach. Energy Policy, 2021, 150, 112154.	8.8	12
41	Optimizing HVAC operation in commercial buildings: A genetic algorithm multi-objective optimization framework. , 2016, , .		11
42	Combined photocatalytic properties and energy efficiency via multifunctional glass. Journal of Environmental Chemical Engineering, 2019, 7, 102980.	6.9	11
43	Mixing work and leisure? Energy conservation actions and spillovers between building occupants at work and at home in the UAE. Energy Research and Social Science, 2019, 47, 215-223.	6.5	11
44	Mathematical Model for the Placement of Hydrogen Refueling Stations to Support Future Fuel Cell Trucks. IEEE Access, 2021, 9, 148118-148131.	4.3	11
45	A level-of-details framework for representing occupant behavior in agent-based models. Automation in Construction, 2022, 139, 104290.	9.9	11
46	An Agent-Based Approach to Model the Effect of Occupants' Energy Use Characteristics in Commercial Buildings. , 2011, , .		10
47	Multidomain Drivers of Occupant Comfort, Productivity, and Well-Being in Buildings: Insights from an Exploratory and Explanatory Analysis. Journal of Management in Engineering - ASCE, 2021, 37, .	4.9	10
48	A decision framework for energy use reduction initiatives in commercial buildings. , 2011, , .		9
49	Urban built context as a passive cooling strategy for buildings in hot climate. Energy and Buildings, 2021, 231, 110606.	6.7	9
50	A data-driven modeling and analysis approach to test the resilience of green buildings to uncertainty in operation patterns. Energy Science and Engineering, 2020, 8, 4250-4269.	3.9	7
51	Non-Intrusive Data Monitoring and Analysis of Occupant Energy-Use Behaviors in Shared Office Spaces. IEEE Access, 2020, 8, 141246-141257.	4.3	7
52	A comprehensive assessment of Dubai's green building rating system: Al Sa'fat. Energy Policy, 2021, 157, 112503.	8.8	7
53	Combining energy efficiency with self-cleaning properties in smart glass functionalized with multilayered semiconductors. Journal of Cleaner Production, 2020, 272, 122830.	9.4	5
54	Demographics as Determinants of Building Occupants' Indoor Environmental Perceptions: Insights from a Machine Learning Incremental Modeling and Analysis Approach. Journal of Computing in Civil Engineering, 2022, 36, .	4.8	5

#	ARTICLE	IF	CITATIONS
55	Uncertainty and simulation-based cost analyses for energy storage systems used in green buildings. International Journal of Energy Research, 2022, 46, 14346-14370.	4.4	4
56	Sensitivity of Energy Simulation Models to Occupancy Related Parameters in Commercial Buildings. , 2012, , .		3
57	Quantifying the impact of uncertainty in human actions on the energy performance of educational buildings. , 2016, , .		3
58	Documenting occupant models for building performance simulation: a state-of-the-art. Journal of Building Performance Simulation, 2022, 15, 634-655.	2.1	3
59	Coupling Distributed Energy Simulation and Occupancy Models for Comprehensive Building Energy Consumption Analysis. , 2013, , .		2
60	Sustainability issues in the GCC. , 2017, , 3-6.		2
61	Holistic Building Performance Evaluation: An Integrated Post-Occupancy Evaluation and Energy Modeling (POEEM) Framework. , 2020, , .		2
62	Crossing borders and methods: Comparing individual and social influences on energy saving in the United Arab Emirates and Germany. Energy Research and Social Science, 2022, 90, 102561.	6.5	2
63	A Data Collection and Analysis Framework to Improve the Performance of Energy-Intensive Commercial Buildings. , 2014, , .		1
64	Smart Cities in the Gulf: An Overview. , 2019, , 3-6.		1
65	A Systematic Approach to Quantifying Energy Savings Potential Because of Improved Operations of Commercial Building Stocks. , 2014, , .		0
66	Machine Learning as Surrogate to Building Performance Simulation: A Building Design Optimization Application. Lecture Notes in Computer Science, 2018, , 94-102.	1.2	0
67	Multi-objective Genetic Algorithm Optimization of HVAC Operation: Integrating Energy Consumption, Thermal Comfort, and Productivity. Green Energy and Technology, 2021, , 261-278.	0.6	0
68	Influence of Social Sub-Networks on Energy Conservation from Occupancy Interventions in a Typical U.S. Commercial Building. , 2013, , .		0
69	Framework of study and book organization. , 2017, , 31-33.		0
70	Outlook towards the future of sustainability in the Gulf. , 2017, , 277-280.		0
71	Outlook of the Future of Smart Cities in the Gulf. , 2019, , 275-279.		0
72	Quantifying the impact of human actions on building energy performance under extreme hot climate. WEENTECH Proceedings in Energy, 0, , .	0.0	0

#	ARTICLE	IF	CITATIONS
73	Design of Metal-Dielectric Multilayer Coatings for Energy-Efficient Building Glazing. Energy Technology, 2022, 10, .	3.7	0