

# Donal Finn

## List of Publications by Citations

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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.

73  
papers

1,245  
citations

20  
h-index

33  
g-index

78  
ext. papers

1,618  
ext. citations

5.5  
avg. IF

5.39  
L-index

#	Paper	IF	Citations
73	Carbon footprint analysis in plastics manufacturing. <i>Journal of Cleaner Production</i> , <b>2013</b> , 51, 133-141	10.3	87
72	Demand response algorithms for smart-grid ready residential buildings using machine learning models. <i>Applied Energy</i> , <b>2019</b> , 239, 1265-1282	10.7	83
71	Indirect evaporative cooling potential in air/water systems in temperate climates. <i>Energy and Buildings</i> , <b>2003</b> , 35, 573-591	7	67
70	The effect of time-of-use tariffs on the demand response flexibility of an all-electric smart-grid-ready dwelling. <i>Energy and Buildings</i> , <b>2016</b> , 128, 56-67	7	66
69	Data-driven predictive control for unlocking building energy flexibility: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2021</b> , 135, 110120	16.2	61
68	Input variable selection for thermal load predictive models of commercial buildings. <i>Energy and Buildings</i> , <b>2017</b> , 137, 13-26	7	57
67	Data Driven Approaches for Prediction of Building Energy Consumption at Urban Level. <i>Energy Procedia</i> , <b>2015</b> , 78, 3378-3383	2.3	53
66	Identification of representative buildings and building groups in urban datasets using a novel pre-processing, classification, clustering and predictive modelling approach. <i>Building and Environment</i> , <b>2018</b> , 140, 90-106	6.5	52
65	Sensitivity of air change rates in a naturally ventilated atrium space subject to variations in external wind speed and direction. <i>Energy and Buildings</i> , <b>2008</b> , 40, 1577-1585	7	51
64	A quasi-steady state mathematical model of an integrated ground source heat pump for building space control. <i>Energy and Buildings</i> , <b>2011</b> , 43, 82-92	7	44
63	On the assessment and control optimisation of demand response programs in residential buildings. <i>Renewable and Sustainable Energy Reviews</i> , <b>2020</b> , 127, 109861	16.2	40
62	Sensitivity analysis of a maritime located night ventilated library building. <i>Solar Energy</i> , <b>2007</b> , 81, 697-710	6.8	35
61	Thermal effectiveness characteristics of low approach indirect evaporative cooling systems in buildings. <i>Energy and Buildings</i> , <b>2007</b> , 39, 1235-1243	7	34
60	Mapping the energy flexibility potential of single buildings equipped with optimally-controlled heat pump, gas boilers and thermal storage. <i>Sustainable Cities and Society</i> , <b>2019</b> , 50, 101689	10.1	32
59	Geocooling with integrated PCM thermal energy storage in a commercial building. <i>Energy</i> , <b>2018</b> , 144, 865-876	7.9	29
58	Flexibility assessment of a combined heat-power system (CHP) with energy storage under real-time energy price market framework. <i>Thermal Science and Engineering Progress</i> , <b>2018</b> , 8, 426-438	3.6	29
57	Clustering of Household Occupancy Profiles for Archetype Building Models. <i>Energy Procedia</i> , <b>2017</b> , 111, 161-170	2.3	28

56	Definition of a useful minimal-set of accurately-specified input data for Building Energy Performance Simulation. <i>Energy and Buildings</i> , <b>2018</b> , 165, 172-183	7	25
55	Implementation of demand response strategies in a multi-purpose commercial building using a whole-building simulation model approach. <i>Energy and Buildings</i> , <b>2016</b> , 131, 76-86	7	25
54	Influence of electricity prices on energy flexibility of integrated hybrid heat pump and thermal storage systems in a residential building. <i>Energy and Buildings</i> , <b>2020</b> , 223, 110142	7	23
53	Generalised water flow rate control strategy for optimal part load operation of ground source heat pump systems. <i>Applied Energy</i> , <b>2015</b> , 150, 50-60	10.7	20
52	SimApi, a smartgrid co-simulation software platform for benchmarking building control algorithms. <i>SoftwareX</i> , <b>2019</b> , 9, 271-281	2.7	18
51	A fundamental unified framework to quantify and characterise energy flexibility of residential buildings with multiple electrical and thermal energy systems. <i>Applied Energy</i> , <b>2021</b> , 282, 116096	10.7	18
50	Development of occupancy-integrated archetypes: Use of data mining clustering techniques to embed occupant behaviour profiles in archetypes. <i>Energy and Buildings</i> , <b>2019</b> , 198, 84-99	7	17
49	Estimating Demand Response Potential in Building Clusters. <i>Energy Procedia</i> , <b>2015</b> , 78, 3391-3396	2.3	16
48	Modelling of a Multi-purpose Commercial Building for Demand Response Analysis. <i>Energy Procedia</i> , <b>2015</b> , 78, 2166-2171	2.3	14
47	Ensemble Calibration of lumped parameter retrofit building models using Particle Swarm Optimization. <i>Energy and Buildings</i> , <b>2017</b> , 155, 513-532	7	14
46	The influence of secondary refrigerant air chiller U-bends on fluid temperature profile and downstream heat transfer for laminar flow conditions. <i>International Journal of Heat and Mass Transfer</i> , <b>2008</b> , 51, 724-735	4.9	14
45	Investment analysis of gas-turbine combined heat and power systems for commercial buildings under different climatic and market scenarios. <i>Energy Conversion and Management</i> , <b>2019</b> , 183, 35-49	10.6	14
44	Towards standardising market-independent indicators for quantifying energy flexibility in buildings. <i>Energy and Buildings</i> , <b>2020</b> , 220, 110027	7	13
43	An Iterative Methodology for Model Complexity Reduction in Residential Building Simulation. <i>Energies</i> , <b>2019</b> , 12, 2448	3.1	12
42	A high-temporal resolution residential building occupancy model to generate high-temporal resolution heating load profiles of occupancy-integrated archetypes. <i>Energy and Buildings</i> , <b>2020</b> , 206, 109577	7	11
41	A methodology for calibration of building energy models at district scale using clustering and surrogate techniques. <i>Energy and Buildings</i> , <b>2020</b> , 226, 110309	7	11
40	Heat transfer correlations for low approach evaporative cooling systems in buildings. <i>Applied Thermal Engineering</i> , <b>2009</b> , 29, 105-115	5.8	10
39	Mathematical modeling of a low temperature low approach direct cooling tower for the provision of high temperature chilled water for conditioning of building spaces. <i>Applied Thermal Engineering</i> , <b>2014</b> , 64, 273-282	5.8	9

38	Data for Urban Scale Building Energy Modelling: Assessing Impacts and Overcoming Availability Challenges. <i>Energies</i> , <b>2020</b> , 13, 4244	3.1	8
37	Modelling residential heat demand supplied by a local smart electric thermal storage system <b>2016</b> ,		8
36	Co-simulation of a HVAC system-integrated phase change material thermal storage unit. <i>Journal of Building Performance Simulation</i> , <b>2017</b> , 10, 313-325	2.8	6
35	Selection of Input Variables for a Thermal Load Prediction Model. <i>Energy Procedia</i> , <b>2015</b> , 78, 3001-3006	2.3	6
34	Economic assessment of flexibility offered by an optimally controlled hybrid heat pump generator: a case study for residential building. <i>Energy Procedia</i> , <b>2018</b> , 148, 1222-1229	2.3	6
33	Performance analysis of a low approach low temperature direct cooling tower for high-temperature building cooling systems. <i>Energy and Buildings</i> , <b>2014</b> , 84, 674-689	7	5
32	A physical modeling assistant for the preliminary stages of finite element analysis. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , <b>1993</b> , 7, 275-286	1.3	5
31	Utilising Time of Use Surveys to Predict Domestic Hot Water Consumption and Heat Demand Profiles of Residential Building Stocks. <i>British Journal of Environment and Climate Change</i> , <b>2016</b> , 6, 77-89		5
30	Knowledge engineering requirements in derivational analogy. <i>Lecture Notes in Computer Science</i> , <b>1994</b> , 234-245	0.9	5
29	Diversification, concentration and renewability of the energy supply in the European Union. <i>Energy</i> , <b>2022</b> , 253, 124097	7.9	5
28	Estimating the Potential for Thermal Load Management in Buildings at a Large Scale: Overcoming Challenges Towards a Replicable Methodology. <i>Energy Procedia</i> , <b>2017</b> , 111, 740-749	2.3	4
27	Accurate measurement of nanofluid thermal conductivity by use of a polysaccharide stabilising agent. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 136, 486-500	4.9	4
26	A restful API to control a energy plus smart grid-ready residential building <b>2014</b> ,		4
25	CFD Reliability Issues in the Prediction of Airflows in a Naturally Ventilated Building. <i>International Journal of Ventilation</i> , <b>2005</b> , 4, 255-268	1.1	4
24	Introduction: Preliminary stages of engineering analysis and modeling. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , <b>1993</b> , 7, 231-237	1.3	4
23	Environmental and economic benefits of building retrofit measures for the residential sector by utilizing sensor data and advanced calibrated models. <i>Advances in Building Energy Research</i> , <b>2020</b> , 1-29	1.8	4
22	Impact of intelligent control algorithms on demand response flexibility and thermal comfort in a smart grid ready residential building. <i>Smart Energy</i> , <b>2021</b> , 2, 100017		4
21	Augmented Ensemble Calibration of lumped-parameter building models. <i>Building Simulation</i> , <b>2019</b> , 12, 207-230	3.9	4

20	AI-DEQSOL. A knowledge-based environment for numerical simulation of engineering problems described by partial differential equations. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , <b>1992</b> , 6, 199-212	1.3	3
19	Integrated cost-optimal residential envelope retrofit decision-making and power systems optimisation using Ensemble models. <i>Energy and Buildings</i> , <b>2020</b> , 214, 109833	7	2
18	Development of an Outdoor Test Facility for Wind Convectors. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , <b>1990</b> , 112, 287-292	2.3	2
17	Heat Transfer to Unfrosted Wind Convectors: Mathematical Modeling and Comparison With Experimental Results. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , <b>1990</b> , 112, 280-286	2.3	2
16	Economic feasibility of wind convectors as heat pump evaporators. <i>International Journal of Energy Research</i> , <b>1990</b> , 14, 407-412	4.5	2
15	Thermal energy storage using phase change material: Analysis of partial tank charging and discharging on system performance in a building cooling application. <i>Applied Thermal Engineering</i> , <b>2021</b> , 198, 117437	5.8	2
14	Self-Learning Control Algorithms for Energy Systems Integration in the Residential Building Sector <b>2019</b> ,		1
13	A set of comprehensive indicators to assess energy flexibility: a case study for residential buildings. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 04044	0.5	1
12	An automatic noncontact measurement technique for investigation of the effect of frosting on wind convector heat transfer performance. <i>Experimental Thermal and Fluid Science</i> , <b>1991</b> , 4, 399-405	3	1
11	Wind Evaporator Heat Pumps Part I: Test Methods. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , <b>1992</b> , 114, 281-285	2.6	1
10	A Centralised Soft Actor Critic Deep Reinforcement Learning Approach to District Demand Side Management through CityLearn <b>2020</b> ,		1
9	Achieving Data Synergy: The Socio-Technical Process of Handling Data <b>2018</b> , 63-81		1
8	High Resolution Residential Domestic Hot Water Consumption Profiles Using Data Mining Clustering Techniques on Time of Use Data. <i>Smart Innovation, Systems and Technologies</i> , <b>2019</b> , 159-168	0.5	1
7	Optimal control of fan coil battery air and water flow rates requiring minimal on-line measurements. <i>Applied Thermal Engineering</i> , <b>2021</b> , 198, 117469	5.8	1
6	Energy assessment of hybrid heat pump systems as a retrofit measure in residential housing stock. <i>E3S Web of Conferences</i> , <b>2019</b> , 111, 01064	0.5	0
5	Enhancing energy management in grid-interactive buildings: A comparison among cooperative and coordinated architectures. <i>Applied Energy</i> , <b>2022</b> , 310, 118497	10.7	0
4	Evaluation of advanced control strategies of electric thermal storage systems in residential building stock. <i>Utilities Policy</i> , <b>2021</b> , 69, 101178	3.3	0
3	Accurate identification of influential building parameters through an integration of global sensitivity and feature selection techniques. <i>Applied Energy</i> , <b>2022</b> , 315, 118956	10.7	0

- 2 An ensemble learning-based framework for assessing the energy flexibility of residential buildings with multicomponent energy systems. *Applied Energy*, **2022**, 315, 118947 10.7 0
- 1 Solution reuse for model generation in numerical simulation. *Advanced Engineering Informatics*, **1998**, 12, 297-314