

# Donal Finn

## 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.

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 | 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         |
| 72 | 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         |
| 71 | An ensemble learning-based framework for assessing the energy flexibility of residential buildings with multicomponent energy systems. <i>Applied Energy</i> , <b>2022</b> , 315, 118947                                      | 10.7 | 0         |
| 70 | Diversification, concentration and renewability of the energy supply in the European Union. <i>Energy</i> , <b>2022</b> , 253, 124097   | 7.9  | 5         |
| 69 | 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         |
| 68 | 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         |
| 67 | 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        |
| 66 | 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        |
| 65 | 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         |
| 64 | 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         |
| 63 | 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        |
| 62 | 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         |
| 61 | 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        |
| 60 | A Centralised Soft Actor Critic Deep Reinforcement Learning Approach to District Demand Side Management through CityLearn <b>2020</b> ,   |      | 1         |
| 59 | Towards standardising market-independent indicators for quantifying energy flexibility in buildings. <i>Energy and Buildings</i> , <b>2020</b> , 220, 110027  | 7    | 13        |
| 58 | 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        |
| 57 | 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        |

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| 56 | 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  |
| 55 | Data for Urban Scale Building Energy Modelling: Assessing Impacts and Overcoming Availability Challenges. <i>Energies</i> , <b>2020</b> , 13, 4244   | 3.1  | 8  |
| 54 | 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 |
| 53 | SimApi, a smartgrid co-simulation software platform for benchmarking building control algorithms. <i>SoftwareX</i> , <b>2019</b> , 9, 271-281  | 2.7  | 18 |
| 52 | 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  |
| 51 | Self-Learning Control Algorithms for Energy Systems Integration in the Residential Building Sector <b>2019</b> ,   |      | 1  |
| 50 | 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 |
| 49 | An Iterative Methodology for Model Complexity Reduction in Residential Building Simulation. <i>Energies</i> , <b>2019</b> , 12, 2448   | 3.1  | 12 |
| 48 | 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  |
| 47 | 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  |
| 46 | 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  |
| 45 | 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 |
| 44 | 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 |
| 43 | Augmented Ensemble Calibration of lumped-parameter building models. <i>Building Simulation</i> , <b>2019</b> , 12, 207-230   | 3.9  | 4  |
| 42 | 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 |
| 41 | Geocooling with integrated PCM thermal energy storage in a commercial building. <i>Energy</i> , <b>2018</b> , 144, 865-876   | 7.9  | 29 |
| 40 | Achieving Data Synergy: The Socio-Technical Process of Handling Data <b>2018</b> , 63-81   |      | 1  |
| 39 | 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  |

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| 38 | 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 |
| 37 | 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 |
| 36 | Clustering of Household Occupancy Profiles for Archetype Building Models. <i>Energy Procedia</i> , <b>2017</b> , 111, 161-170  | 2.3  | 28 |
| 35 | 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  |
| 34 | Input variable selection for thermal load predictive models of commercial buildings. <i>Energy and Buildings</i> , <b>2017</b> , 137, 13-26  | 7    | 57 |
| 33 | 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 |
| 32 | 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  |
| 31 | 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 |
| 30 | 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 |
| 29 | 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  |
| 28 | Modelling residential heat demand supplied by a local smart electric thermal storage system <b>2016</b> ,  |      | 8  |
| 27 | 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 |
| 26 | Modelling of a Multi-purpose Commercial Building for Demand Response Analysis. <i>Energy Procedia</i> , <b>2015</b> , 78, 2166-2171  | 2.3  | 14 |
| 25 | 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 |
| 24 | Selection of Input Variables for a Thermal Load Prediction Model. <i>Energy Procedia</i> , <b>2015</b> , 78, 3001-3006   | 2.3  | 6  |
| 23 | Estimating Demand Response Potential in Building Clusters. <i>Energy Procedia</i> , <b>2015</b> , 78, 3391-3396  | 2.3  | 16 |
| 22 | 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  |
| 21 | 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  |

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|----|---|------|----|
| 20 | A restful API to control a energy plus smart grid-ready residential building <b>2014</b> ,  |      | 4  |
| 19 | Carbon footprint analysis in plastics manufacturing. <i>Journal of Cleaner Production</i> , <b>2013</b> , 51, 133-141   | 10.3 | 87 |
| 18 | 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 |
| 17 | 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 |
| 16 | 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 |
| 15 | 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 |
| 14 | Sensitivity analysis of a maritime located night ventilated library building. <i>Solar Energy</i> , <b>2007</b> , 81, 697-710   | 0.8  | 35 |
| 13 | 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 |
| 12 | 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  |
| 11 | Indirect evaporative cooling potential in air-water systems in temperate climates. <i>Energy and Buildings</i> , <b>2003</b> , 35, 573-591  | 7    | 67 |
| 10 | Solution reuse for model generation in numerical simulation. <i>Advanced Engineering Informatics</i> , <b>1998</b> , 12, 297-314  |      |    |
| 9  | Knowledge engineering requirements in derivational analogy. <i>Lecture Notes in Computer Science</i> , <b>1994</b> , 234-245  | 0.9  | 5  |
| 8  | 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  |
| 7  | 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  |
| 6  | 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  |
| 5  | 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  |
| 4  | 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  |
| 3  | 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  |

- 2 Heat Transfer to Unfrosted Wind Convectors: Mathematical Modeling and Comparison With Experimental Results. *Journal of Solar Energy Engineering, Transactions of the ASME*, **1990**, 112, 280-286 <sup>2,3</sup> 2
- 1 Economic feasibility of wind convectors as heat pump evaporators. *International Journal of Energy Research*, **1990**, 14, 407-412 4-5 2