

# Fu Xiao

## 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.

128  
papers

5,491  
citations

43  
h-index

70  
g-index

132  
ext. papers

6,687  
ext. citations

6.7  
avg, IF

6.52  
L-index

#	Paper	IF	Citations
128	A short-term building cooling load prediction method using deep learning algorithms. <i>Applied Energy</i> , <b>2017</b> , 195, 222-233	10.7	317
127	Development of prediction models for next-day building energy consumption and peak power demand using data mining techniques. <i>Applied Energy</i> , <b>2014</b> , 127, 1-10	10.7	299
126	Peak load shifting control using different cold thermal energy storage facilities in commercial buildings: A review. <i>Energy Conversion and Management</i> , <b>2013</b> , 71, 101-114	10.6	205
125	Quantitative energy performance assessment methods for existing buildings. <i>Energy and Buildings</i> , <b>2012</b> , 55, 873-888	7	187
124	Data mining in building automation system for improving building operational performance. <i>Energy and Buildings</i> , <b>2014</b> , 75, 109-118	7	171
123	AHU sensor fault diagnosis using principal component analysis method. <i>Energy and Buildings</i> , <b>2004</b> , 36, 147-160	7	147
122	A framework for knowledge discovery in massive building automation data and its application in building diagnostics. <i>Automation in Construction</i> , <b>2015</b> , 50, 81-90	9.6	139
121	Pattern recognition-based chillers fault detection method using Support Vector Data Description (SVDD). <i>Applied Energy</i> , <b>2013</b> , 112, 1041-1048	10.7	131
120	An intelligent chiller fault detection and diagnosis methodology using Bayesian belief network. <i>Energy and Buildings</i> , <b>2013</b> , 57, 278-288	7	130
119	An interactive building power demand management strategy for facilitating smart grid optimization. <i>Applied Energy</i> , <b>2014</b> , 116, 297-310	10.7	115
118	Analytical investigation of autoencoder-based methods for unsupervised anomaly detection in building energy data. <i>Applied Energy</i> , <b>2018</b> , 211, 1123-1135	10.7	107
117	Unsupervised data analytics in mining big building operational data for energy efficiency enhancement: A review. <i>Energy and Buildings</i> , <b>2018</b> , 159, 296-308	7	103
116	Research and application of evaporative cooling in China: A review (I) [Research. <i>Renewable and Sustainable Energy Reviews</i> , <b>2012</b> , 16, 3535-3546	16.2	98
115	Temporal knowledge discovery in big BAS data for building energy management. <i>Energy and Buildings</i> , <b>2015</b> , 109, 75-89	7	94
114	Control performance of a dedicated outdoor air system adopting liquid desiccant dehumidification. <i>Applied Energy</i> , <b>2011</b> , 88, 143-149	10.7	93
113	A system-level fault detection and diagnosis strategy for HVAC systems involving sensor faults. <i>Energy and Buildings</i> , <b>2010</b> , 42, 477-490	7	88
112	A grey-box model of next-day building thermal load prediction for energy-efficient control. <i>International Journal of Energy Research</i> , <b>2008</b> , 32, 1418-1431	4.5	88

111	Diagnostic Bayesian networks for diagnosing air handling units faults [part I: Faults in dampers, fans, filters and sensors. <i>Applied Thermal Engineering</i> , <b>2017</b> , 111, 1272-1286	5.8	84
110	Investigation of a novel thermoelectric radiant air-conditioning system. <i>Energy and Buildings</i> , <b>2013</b> , 59, 123-132	7	81
109	Enhanced chiller sensor fault detection, diagnosis and estimation using wavelet analysis and principal component analysis methods. <i>Applied Thermal Engineering</i> , <b>2008</b> , 28, 226-237	5.8	78
108	A model-based optimal ventilation control strategy of multi-zone VAV air-conditioning systems. <i>Applied Thermal Engineering</i> , <b>2009</b> , 29, 91-104	5.8	76
107	District cooling systems: Technology integration, system optimization, challenges and opportunities for applications. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 53, 253-264	16.2	75
106	Bayesian network based FDD strategy for variable air volume terminals. <i>Automation in Construction</i> , <b>2014</b> , 41, 106-118	9.6	71
105	Detection and diagnosis of AHU sensor faults using principal component analysis method. <i>Energy Conversion and Management</i> , <b>2004</b> , 45, 2667-2686	10.6	67
104	A statistical fault detection and diagnosis method for centrifugal chillers based on exponentially-weighted moving average control charts and support vector regression. <i>Applied Thermal Engineering</i> , <b>2013</b> , 51, 560-572	5.8	66
103	Statistical investigations of transfer learning-based methodology for short-term building energy predictions. <i>Applied Energy</i> , <b>2020</b> , 262, 114499	10.7	65
102	Active pipe-embedded structures in buildings for utilizing low-grade energy sources: A review. <i>Energy and Buildings</i> , <b>2010</b> , 42, 1567-1581	7	63
101	A supervisory control strategy for building cooling water systems for practical and real time applications. <i>Energy Conversion and Management</i> , <b>2008</b> , 49, 2324-2336	10.6	63
100	Investigation on capacity matching in liquid desiccant and heat pump hybrid air-conditioning systems. <i>International Journal of Refrigeration</i> , <b>2012</b> , 35, 160-170	3.8	62
99	Control strategies for a liquid desiccant air-conditioning system. <i>Energy and Buildings</i> , <b>2011</b> , 43, 1499-1507	5.7	59
98	An isolation enhanced PCA method with expert-based multivariate decoupling for sensor FDD in air-conditioning systems. <i>Applied Thermal Engineering</i> , <b>2009</b> , 29, 712-722	5.8	58
97	Model-based optimal control of a dedicated outdoor air-chilled ceiling system using liquid desiccant and membrane-based total heat recovery. <i>Applied Energy</i> , <b>2011</b> , 88, 4180-4190	10.7	54
96	Investigation of demand response potentials of residential air conditioners in smart grids using grey-box room thermal model. <i>Applied Energy</i> , <b>2017</b> , 207, 324-335	10.7	53
95	Advanced data analytics for enhancing building performances: From data-driven to big data-driven approaches. <i>Building Simulation</i> , <b>2021</b> , 14, 3-24	3.9	53
94	Progress and methodologies of lifecycle commissioning of HVAC systems to enhance building sustainability. <i>Renewable and Sustainable Energy Reviews</i> , <b>2009</b> , 13, 1144-1149	16.2	51

93	A novel methodology to explain and evaluate data-driven building energy performance models based on interpretable machine learning. <i>Applied Energy</i> , <b>2019</b> , 235, 1551-1560	10.7	50
92	A simplified energy performance assessment method for existing buildings based on energy bill disaggregation. <i>Energy and Buildings</i> , <b>2012</b> , 55, 563-574	7	49
91	Price-responsive model-based optimal demand response control of inverter air conditioners using genetic algorithm. <i>Applied Energy</i> , <b>2018</b> , 219, 151-164	10.7	48
90	An experimental study on the dehumidification performance of a counter flow liquid desiccant dehumidifier. <i>International Journal of Refrigeration</i> , <b>2016</b> , 70, 289-301	3.8	48
89	A diagnostic tool for online sensor health monitoring in air-conditioning systems. <i>Automation in Construction</i> , <b>2006</b> , 15, 489-503	9.6	48
88	Robust optimal design of building cooling systems considering cooling load uncertainty and equipment reliability. <i>Applied Energy</i> , <b>2015</b> , 159, 265-275	10.7	45
87	Development of dynamic simplified thermal models of active pipe-embedded building envelopes using genetic algorithm. <i>International Journal of Thermal Sciences</i> , <b>2014</b> , 76, 258-272	4.1	44
86	Price-responsive model predictive control of floor heating systems for demand response using building thermal mass. <i>Applied Thermal Engineering</i> , <b>2019</b> , 153, 316-329	5.8	44
85	Numerical and experimental analysis of transient supercooling effect of voltage pulse on thermoelectric element. <i>International Journal of Refrigeration</i> , <b>2012</b> , 35, 1156-1165	3.8	43
84	Performance analysis of liquid desiccant based air-conditioning system under variable fresh air ratios. <i>Energy and Buildings</i> , <b>2010</b> , 42, 2457-2464	7	43
83	A robust pattern recognition-based fault detection and diagnosis (FDD) method for chillers. <i>HVAC and R Research</i> , <b>2014</b> , 20, 798-809		41
82	A fault detection and diagnosis strategy with enhanced sensitivity for centrifugal chillers. <i>Applied Thermal Engineering</i> , <b>2011</b> , 31, 3963-3970	5.8	41
81	Simultaneous heat and moisture transfer through a composite supported liquid membrane. <i>International Journal of Heat and Mass Transfer</i> , <b>2008</b> , 51, 2179-2189	4.9	41
80	An online adaptive optimal control strategy for complex building chilled water systems involving intermediate heat exchangers. <i>Applied Thermal Engineering</i> , <b>2013</b> , 50, 614-628	5.8	39
79	Model-based optimal design of active cool thermal energy storage for maximal life-cycle cost saving from demand management in commercial buildings. <i>Applied Energy</i> , <b>2017</b> , 201, 382-396	10.7	38
78	An uncertainty-based design optimization method for district cooling systems. <i>Energy</i> , <b>2016</b> , 102, 516-527	9	38
77	Neural network based prediction method for preventing condensation in chilled ceiling systems. <i>Energy and Buildings</i> , <b>2012</b> , 45, 290-298	7	37
76	A multi-level energy performance diagnosis method for energy information poor buildings. <i>Energy</i> , <b>2015</b> , 83, 189-203	7.9	35

75	Performance assessment of district cooling systems for a new development district at planning stage. <i>Applied Energy</i> , <b>2015</b> , 140, 33-43	10.7	35
74	Research and applications of evaporative cooling in China: A review (II) Systems and equipment. <i>Renewable and Sustainable Energy Reviews</i> , <b>2012</b> , 16, 3523-3534	16.2	34
73	Development and validation of a simplified online cooling load prediction strategy for a super high-rise building in Hong Kong. <i>Energy Conversion and Management</i> , <b>2013</b> , 68, 20-27	10.6	34
72	Frequency control of air conditioners in response to real-time dynamic electricity prices in smart grids. <i>Applied Energy</i> , <b>2019</b> , 242, 92-106	10.7	32
71	Discovering gradual patterns in building operations for improving building energy efficiency. <i>Applied Energy</i> , <b>2018</b> , 224, 116-123	10.7	32
70	A Novel Strategy for the Fault Detection and Diagnosis of Centrifugal Chiller Systems. <i>HVAC and R Research</i> , <b>2009</b> , 15, 57-75		32
69	Online performance evaluation of alternative control strategies for building cooling water systems prior to in situ implementation. <i>Applied Energy</i> , <b>2009</b> , 86, 712-721	10.7	30
68	Probabilistic approach for uncertainty-based optimal design of chiller plants in buildings. <i>Applied Energy</i> , <b>2017</b> , 185, 1613-1624	10.7	29
67	The step-change cooling performance of miniature thermoelectric module for pulse laser. <i>Energy Conversion and Management</i> , <b>2014</b> , 80, 39-45	10.6	29
66	Quantifying uncertainty in the aggregate energy flexibility of high-rise residential building clusters considering stochastic occupancy and occupant behavior. <i>Energy</i> , <b>2020</b> , 194, 116838	7.9	29
65	Robust optimal design of district cooling systems and the impacts of uncertainty and reliability. <i>Energy and Buildings</i> , <b>2016</b> , 122, 11-22	7	29
64	Development and validation of an effective and robust chiller sequence control strategy using data-driven models. <i>Automation in Construction</i> , <b>2016</b> , 65, 78-85	9.6	28
63	In situ performance comparison and evaluation of three chiller sequencing control strategies in a super high-rise building. <i>Energy and Buildings</i> , <b>2013</b> , 61, 333-343	7	28
62	Conjugate heat and mass transfer in a total heat exchanger with cross-corrugated triangular ducts and one-step made asymmetric membranes. <i>International Journal of Heat and Mass Transfer</i> , <b>2015</b> , 84, 390-400	4.9	28
61	A data fusion scheme for building automation systems of building central chilling plants. <i>Automation in Construction</i> , <b>2009</b> , 18, 302-309	9.6	27
60	A hybrid building thermal modeling approach for predicting temperatures in typical, detached, two-story houses. <i>Applied Energy</i> , <b>2019</b> , 236, 101-116	10.7	27
59	A semi-dynamic model of active pipe-embedded building envelope for thermal performance evaluation. <i>International Journal of Thermal Sciences</i> , <b>2015</b> , 88, 170-179	4.1	25
58	Sensor Fault Detection and Diagnosis of Air-Handling Units Using a Condition-Based Adaptive Statistical Method. <i>HVAC and R Research</i> , <b>2006</b> , 12, 127-150		25

57	Building demand response and control methods for smart grids: A review. <i>Science and Technology for the Built Environment</i> , <b>2016</b> , 22, 692-704	1.8	24
56	Development of an ANN-based building energy model for information-poor buildings using transfer learning. <i>Building Simulation</i> , <b>2021</b> , 14, 89-101	3.9	24
55	Experimental study on ammonia-water falling film absorption in external magnetic fields. <i>International Journal of Refrigeration</i> , <b>2010</b> , 33, 686-694	3.8	21
54	A dynamic dehumidifier model for simulations and control of liquid desiccant hybrid air conditioning systems. <i>Energy and Buildings</i> , <b>2017</b> , 140, 418-429	7	20
53	Mining big building operational data for improving building energy efficiency: A case study. <i>Building Services Engineering Research and Technology</i> , <b>2018</b> , 39, 117-128	2.3	20
52	Smart Detection of Fire Source in Tunnel Based on the Numerical Database and Artificial Intelligence. <i>Fire Technology</i> , <b>2021</b> , 57, 657-682	3	20
51	Diagnosis of the low temperature difference syndrome in the chilled water system of a super high-rise building: A case study. <i>Applied Energy</i> , <b>2012</b> , 98, 597-606	10.7	19
50	A museum storeroom air-conditioning system employing the temperature and humidity independent control device in the cooling coil. <i>Applied Thermal Engineering</i> , <b>2011</b> , 31, 3653-3657	5.8	19
49	Neighborhood-level coordination and negotiation techniques for managing demand-side flexibility in residential microgrids. <i>Renewable and Sustainable Energy Reviews</i> , <b>2021</b> , 135, 110248	16.2	19
48	Experimental study on the effect of magnetic field on the heat conductivity and viscosity of ammonia-water. <i>Energy and Buildings</i> , <b>2011</b> , 43, 1164-1168	7	18
47	Urban Traffic Prediction through the Second Use of Inexpensive Big Data from Buildings <b>2016</b> ,		16
46	Wetting enhancement of polypropylene plate for falling film tower application. <i>Chemical Engineering and Processing: Process Intensification</i> , <b>2016</b> , 108, 1-9	3.7	14
45	Performance study of a constant temperature and humidity air-conditioning system with temperature and humidity independent control device. <i>Energy and Buildings</i> , <b>2012</b> , 49, 640-646	7	14
44	Attention-based interpretable neural network for building cooling load prediction. <i>Applied Energy</i> , <b>2021</b> , 299, 117238	10.7	14
43	The practical performance forecast and analysis of thermoelectric module from macro to micro. <i>Energy Conversion and Management</i> , <b>2015</b> , 100, 23-29	10.6	13
42	Cooling Supply-based HVAC System Control for Fast Demand Response of Buildings to Urgent Requests of Smart Grids. <i>Energy Procedia</i> , <b>2016</b> , 103, 34-39	2.3	13
41	A data analytics-based tool for the detection and diagnosis of anomalous daily energy patterns in buildings. <i>Building Simulation</i> , <b>2021</b> , 14, 131-147	3.9	13
40	Perspectives of big experimental database and artificial intelligence in tunnel fire research. <i>Tunnelling and Underground Space Technology</i> , <b>2021</b> , 108, 103691	5.7	13

39	Assessment of Building Operational Performance Using Data Mining Techniques: A Case Study. <i>Energy Procedia</i> , <b>2017</b> , 111, 1070-1078	2.3	12
38	A graph mining-based methodology for discovering and visualizing high-level knowledge for building energy management. <i>Applied Energy</i> , <b>2019</b> , 251, 113395	10.7	12
37	Performance Assessment of District Cooling System Coupled with Different Energy Technologies in Subtropical Area. <i>Energy Procedia</i> , <b>2015</b> , 75, 1235-1241	2.3	12
36	Robust optimal design of building cooling systems concerning uncertainties using mini-max regret theory. <i>Science and Technology for the Built Environment</i> , <b>2015</b> , 21, 789-799	1.8	12
35	Effects of initial mist conditions on simulation accuracy of humidity distribution in an environmental chamber. <i>Building and Environment</i> , <b>2012</b> , 47, 217-222	6.5	11
34	Mining Gradual Patterns in Big Building Operational Data for Building Energy Efficiency Enhancement. <i>Energy Procedia</i> , <b>2017</b> , 143, 119-124	2.3	9
33	Retrofitting building fire service water tanks as chilled water storage for power demand limiting. <i>Building Services Engineering Research and Technology</i> , <b>2017</b> , 38, 47-63	2.3	8
32	Analysis of Typical Meteorological Year selection for energy simulation of building with daylight utilization. <i>Procedia Engineering</i> , <b>2017</b> , 205, 3080-3087		8
31	Optimization of a liquid desiccant based dedicated outdoor air-chilled ceiling system serving multi-zone spaces. <i>Building Simulation</i> , <b>2012</b> , 5, 257-266	3.9	8
30	A real-time forecast of tunnel fire based on numerical database and artificial intelligence. <i>Building Simulation</i> , 1	3.9	8
29	Effects of discharge recirculation in cooling towers on energy efficiency and visible plume potential of chilling plants. <i>Applied Thermal Engineering</i> , <b>2012</b> , 39, 37-44	5.8	7
28	Research and Applications of Data Mining Techniques for Improving Building Operational Performance. <i>Current Sustainable/Renewable Energy Reports</i> , <b>2018</b> , 5, 181-188	2.8	6
27	Effects of different inlet vent positions on the uniformity of humidity inside a building chamber. <i>Energy and Buildings</i> , <b>2014</b> , 76, 565-571	7	6
26	District cooling systems and individual cooling systems: Comparative analysis and impacts of key factors. <i>Science and Technology for the Built Environment</i> , <b>2017</b> , 23, 241-250	1.8	5
25	An adaptive optimal monthly peak building demand limiting strategy considering load uncertainty. <i>Applied Energy</i> , <b>2019</b> , 253, 113582	10.7	5
24	Investigation of the Demand Response Potentials of Residential Air Conditioners Using Grey-box Room Thermal Model. <i>Energy Procedia</i> , <b>2017</b> , 105, 2759-2765	2.3	5
23	Discovering Complex Knowledge in Massive Building Operational Data Using Graph Mining for Building Energy Management. <i>Energy Procedia</i> , <b>2019</b> , 158, 2481-2487	2.3	4
22	Experimental investigation of maldistribution in vertical plate falling film tower. <i>Chemical Engineering Communications</i> , <b>2017</b> , 204, 1237-1245	2.2	4

21	Energy-efficient decentralized control method with enhanced robustness for multi-evaporator air conditioning systems. <i>Applied Energy</i> , <b>2020</b> , 279, 115732	10.7	4
20	Generation of typical meteorological year for integrated climate based daylight modeling and building energy simulation. <i>Renewable Energy</i> , <b>2020</b> , 160, 721-729	8.1	4
19	Mining Big Building Operational Data for Building Cooling Load Prediction and Energy Efficiency Improvement <b>2017</b> ,		3
18	Performance analysis of absorption thermal energy storage for distributed energy systems. <i>Energy Procedia</i> , <b>2019</b> , 158, 3152-3157	2.3	3
17	A model-based adaptive method for evaluating the energy impact of low delta-T syndrome in complex HVAC systems using support vector regression. <i>Building Services Engineering Research and Technology</i> , <b>2016</b> , 37, 573-596	2.3	3
16	Experimental study of dynamic characteristics of liquid desiccant dehumidification processes. <i>Science and Technology for the Built Environment</i> , <b>2017</b> , 23, 91-104	1.8	3
15	Evaluation of alternative arrangements of a heat pump system for plume abatement in a large-scale chiller plant in a subtropical region. <i>Energy and Buildings</i> , <b>2009</b> , 41, 596-606	7	3
14	Performance intensification of regeneration process for non-corrosive plastic plate vertical falling film tower. <i>Applied Thermal Engineering</i> , <b>2019</b> , 162, 114301	5.8	2
13	Model-based optimal load control of inverter-driven air conditioners responding to dynamic electricity pricing. <i>Energy Procedia</i> , <b>2017</b> , 142, 1953-1959	2.3	2
12	Comparison study of air mixing modes in liquid desiccant based all-air air conditioning systems. <i>Building Services Engineering Research and Technology</i> , <b>2012</b> , 33, 423-435	2.3	2
11	Commissioning of AHU sensors using principal component analysis method. <i>Building Services Engineering Research and Technology</i> , <b>2003</b> , 24, 179-189	2.3	2
10	Optimal Design of Active Cool Thermal Energy Storage Concerning Life-cycle Cost Saving for Demand Management in Non-residential Building. <i>Energy Procedia</i> , <b>2016</b> , 103, 64-69	2.3	2
9	Identification of simplified energy performance models of variable-speed air conditioners using likelihood ratio test method. <i>Science and Technology for the Built Environment</i> , <b>2020</b> , 26, 75-88	1.8	2
8	Lattice Boltzmann Simulation of Falling Film Flow under Low Reynolds Number. <i>Heat Transfer Engineering</i> , <b>2018</b> , 39, 1528-1539	1.7	1
7	A Fault Detection and Diagnosis Method for Low Delta-T Syndrome in a Complex Air-conditioning System. <i>Energy Procedia</i> , <b>2014</b> , 61, 2514-2517	2.3	1
6	Real-time forecast of compartment fire and flashover based on deep learning. <i>Fire Safety Journal</i> , <b>2022</b> , 103579	3.3	1
5	A novel modified LiCl solution for three-phase absorption thermal energy storage and its thermal and physical properties. <i>International Journal of Refrigeration</i> , <b>2021</b> , 130, 44-55	3.8	0
4	Study on heat and mass transfer characteristics of internally-cooled hollow fiber membrane-based liquid desiccant dehumidifiers. <i>Applied Thermal Engineering</i> , <b>2022</b> , 118525	5.8	0



- 3 Experimental and theoretical analysis of functional controllability for multi-condenser heat pumps. *Applied Thermal Engineering*, **2020**, 171, 115093 5.8
- 2 A proactive-adaptive monthly peak demand-limiting strategy for buildings with small-scale thermal storages considering load uncertainty. *Science and Technology for the Built Environment*, **2019**, 25, 1456-1466 1.8
- 1 The influence of exterior obstruction on the integrated evaluation of daylight utilization during initial design stage. *Procedia Engineering*, **2017**, 205, 2785-2792