# Fu Xiao

List of Publications by Year
in descending order

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|---|---|---|---|
| 135<br>papers | 7,909<br>citations | 34105<br>52<br>h-index | 51608<br>86<br>g-index |
| 135<br>all docs | 135<br>docs citations | 135<br>times ranked | 4630<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A short-term building cooling load prediction method using deep learning algorithms. Applied Energy, 2017, 195, 222-233. | 10.1 | 481 |
| 2 | Development of prediction models for next-day building energy consumption and peak power demand using data mining techniques. Applied Energy, 2014, 127, 1-10. | 10.1 | 414 |
| 3 | Peak load shifting control using different cold thermal energy storage facilities in commercial buildings: A review. Energy Conversion and Management, 2013, 71, 101-114. | 9.2 | 259 |
| 4 | Quantitative energy performance assessment methods for existing buildings. Energy and Buildings, 2012, 55, 873-888. | 6.7 | 240 |
| 5 | Data mining in building automation system for improving building operational performance. Energy and Buildings, 2014, 75, 109-118. | 6.7 | 210 |
| 6 | Pattern recognition-based chillers fault detection method using Support Vector Data Description (SVDD). Applied Energy, 2013, 112, 1041-1048. | 10.1 | 201 |
| 7 | Analytical investigation of autoencoder-based methods for unsupervised anomaly detection in building energy data. Applied Energy, 2018, 211, 1123-1135. | 10.1 | 183 |
| 8 | AHU sensor fault diagnosis using principal component analysis method. Energy and Buildings, 2004, 36, 147-160. | 6.7 | 180 |
| 9 | An intelligent chiller fault detection and diagnosis methodology using Bayesian belief network. Energy and Buildings, 2013, 57, 278-288. | 6.7 | 176 |
| 10 | A framework for knowledge discovery in massive building automation data and its application in building diagnostics. Automation in Construction, 2015, 50, 81-90. | 9.8 | 173 |
| 11 | An interactive building power demand management strategy for facilitating smart grid optimization. Applied Energy, 2014, 116, 297-310. | 10.1 | 150 |
| 12 | Research and application of evaporative cooling in China: A review (I) â€“ Research. Renewable and Sustainable Energy Reviews, 2012, 16, 3535-3546. | 16.4 | 146 |
| 13 | Unsupervised data analytics in mining big building operational data for energy efficiency enhancement: A review. Energy and Buildings, 2018, 159, 296-308. | 6.7 | 146 |
| 14 | Statistical investigations of transfer learning-based methodology for short-term building energy predictions. Applied Energy, 2020, 262, 114499. | 10.1 | 130 |
| 15 | Diagnostic Bayesian networks for diagnosing air handling units faults â€“ part I: Faults in dampers, fans, filters and sensors. Applied Thermal Engineering, 2017, 111, 1272-1286. | 6.0 | 124 |
| 16 | Temporal knowledge discovery in big BAS data for building energy management. Energy and Buildings, 2015, 109, 75-89. | 6.7 | 118 |
| 17 | Advanced data analytics for enhancing building performances: From data-driven to big data-driven approaches. Building Simulation, 2021, 14, 3-24. | 5.6 | 116 |
| 18 | A system-level fault detection and diagnosis strategy for HVAC systems involving sensor faults. Energy and Buildings, 2010, 42, 477-490. | 6.7 | 114 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Control performance of a dedicated outdoor air system adopting liquid desiccant dehumidification. Applied Energy, 2011, 88, 143-149. | 10.1 | 106 |
| 20 | A novel methodology to explain and evaluate data-driven building energy performance models based on interpretable machine learning. Applied Energy, 2019, 235, 1551-1560. | 10.1 | 103 |
| 21 | Investigation of a novel thermoelectric radiant air-conditioning system. Energy and Buildings, 2013, 59, 123-132. | 6.7 | 102 |
| 22 | Enhanced chiller sensor fault detection, diagnosis and estimation using wavelet analysis and principal component analysis methods. Applied Thermal Engineering, 2008, 28, 226-237. | 6.0 | 101 |
| 23 | Bayesian network based FDD strategy for variable air volume terminals. Automation in Construction, 2014, 41, 106-118. | 9.8 | 101 |
| 24 | District cooling systems: Technology integration, system optimization, challenges and opportunities for applications. Renewable and Sustainable Energy Reviews, 2016, 53, 253-264. | 16.4 | 101 |
| 25 | A grey-box model of next-day building thermal load prediction for energy-efficient control. International Journal of Energy Research, 2008, 32, 1418-1431. | 4.5 | 100 |
| 26 | A statistical fault detection and diagnosis method for centrifugal chillers based on exponentially-weighted moving average control charts and support vector regression. Applied Thermal Engineering, 2013, 51, 560-572. | 6.0 | 99 |
| 27 | Price-responsive model-based optimal demand response control of inverter air conditioners using genetic algorithm. Applied Energy, 2018, 219, 151-164. | 10.1 | 94 |
| 28 | Price-responsive model predictive control of floor heating systems for demand response using building thermal mass. Applied Thermal Engineering, 2019, 153, 316-329. | 6.0 | 94 |
| 29 | Attention-based interpretable neural network for building cooling load prediction. Applied Energy, 2021, 299, 117238. | 10.1 | 92 |
| 30 | A model-based optimal ventilation control strategy of multi-zone VAV air-conditioning systems. Applied Thermal Engineering, 2009, 29, 91-104. | 6.0 | 91 |
| 31 | Active pipe-embedded structures in buildings for utilizing low-grade energy sources: A review. Energy and Buildings, 2010, 42, 1567-1581. | 6.7 | 87 |
| 32 | Investigation of demand response potentials of residential air conditioners in smart grids using grey-box room thermal model. Applied Energy, 2017, 207, 324-335. | 10.1 | 87 |
| 33 | Detection and diagnosis of AHU sensor faults using principal component analysis method. Energy Conversion and Management, 2004, 45, 2667-2686. | 9.2 | 84 |
| 34 | Smart Detection of Fire Source in Tunnel Based on the Numerical Database and Artificial Intelligence. Fire Technology, 2021, 57, 657-682. | 3.0 | 81 |
| 35 | A supervisory control strategy for building cooling water systems for practical and real time applications. Energy Conversion and Management, 2008, 49, 2324-2336. | 9.2 | 78 |
| 36 | Investigation on capacity matching in liquid desiccant and heat pump hybrid air-conditioning systems. International Journal of Refrigeration, 2012, 35, 160-170. | 3.4 | 73 |

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|---|---|---|---|
| 37 | Control strategies for a liquid desiccant air-conditioning system. Energy and Buildings, 2011, 43, 1499-1507. | 6.7 | 69 |
| 38 | An isolation enhanced PCA method with expert-based multivariate decoupling for sensor FDD in air-conditioning systems. Applied Thermal Engineering, 2009, 29, 712-722. | 6.0 | 66 |
| 39 | Progress and methodologies of lifecycle commissioning of HVAC systems to enhance building sustainability. Renewable and Sustainable Energy Reviews, 2009, 13, 1144-1149. | 16.4 | 64 |
| 40 | Model-based optimal control of a dedicated outdoor air-chilled ceiling system using liquid desiccant and membrane-based total heat recovery. Applied Energy, 2011, 88, 4180-4190. | 10.1 | 64 |
| 41 | A hybrid building thermal modeling approach for predicting temperatures in typical, detached, two-story houses. Applied Energy, 2019, 236, 101-116. | 10.1 | 60 |
| 42 | A fault detection and diagnosis strategy with enhanced sensitivity for centrifugal chillers. Applied Thermal Engineering, 2011, 31, 3963-3970. | 6.0 | 59 |
| 43 | Neighborhood-level coordination and negotiation techniques for managing demand-side flexibility in residential microgrids. Renewable and Sustainable Energy Reviews, 2021, 135, 110248. | 16.4 | 59 |
| 44 | A diagnostic tool for online sensor health monitoring in air-conditioning systems. Automation in Construction, 2006, 15, 489-503. | 9.8 | 58 |
| 45 | Development of dynamic simplified thermal models of active pipe-embedded building envelopes using genetic algorithm. International Journal of Thermal Sciences, 2014, 76, 258-272. | 4.9 | 58 |
| 46 | Robust optimal design of building cooling systems considering cooling load uncertainty and equipment reliability. Applied Energy, 2015, 159, 265-275. | 10.1 | 58 |
| 47 | A robust pattern recognition-based fault detection and diagnosis (FDD) method for chillers. HVAC and R Research, 2014, 20, 798-809. | 0.6 | 57 |
| 48 | Development of an ANN-based building energy model for information-poor buildings using transfer learning. Building Simulation, 2021, 14, 89-101. | 5.6 | 57 |
| 49 | An experimental study on the dehumidification performance of a counter flow liquid desiccant dehumidifier. International Journal of Refrigeration, 2016, 70, 289-301. | 3.4 | 55 |
| 50 | Model-based optimal design of active cool thermal energy storage for maximal life-cycle cost saving from demand management in commercial buildings. Applied Energy, 2017, 201, 382-396. | 10.1 | 55 |
| 51 | A simplified energy performance assessment method for existing buildings based on energy bill disaggregation. Energy and Buildings, 2012, 55, 563-574. | 6.7 | 54 |
| 52 | Frequency control of air conditioners in response to real-time dynamic electricity prices in smart grids. Applied Energy, 2019, 242, 92-106. | 10.1 | 54 |
| 53 | A Novel Strategy for the Fault Detection and Diagnosis of Centrifugal Chiller Systems. HVAC and R Research, 2009, 15, 57-75. | 0.6 | 53 |
| 54 | An uncertainty-based design optimization method for district cooling systems. Energy, 2016, 102, 516-527. | 8.8 | 53 |

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|---|---|---|---|
| 55 | Quantifying uncertainty in the aggregate energy flexibility of high-rise residential building clusters considering stochastic occupancy and occupant behavior. Energy, 2020, 194, 116838. | 8.8 | 53 |
| 56 | Performance assessment of district cooling systems for a new development district at planning stage. Applied Energy, 2015, 140, 33-43. | 10.1 | 51 |
| 57 | Numerical and experimental analysis of transient supercooling effect of voltage pulse on thermoelectric element. International Journal of Refrigeration, 2012, 35, 1156-1165. | 3.4 | 50 |
| 58 | A multi-level energy performance diagnosis method for energy information poor buildings. Energy, 2015, 83, 189-203. | 8.8 | 50 |
| 59 | Research and applications of evaporative cooling in China: A review (II)â€"Systems and equipment. Renewable and Sustainable Energy Reviews, 2012, 16, 3523-3534. | 16.4 | 49 |
| 60 | Simultaneous heat and moisture transfer through a composite supported liquid membrane. International Journal of Heat and Mass Transfer, 2008, 51, 2179-2189. | 4.8 | 48 |
| 61 | Performance analysis of liquid desiccant based air-conditioning system under variable fresh air ratios. Energy and Buildings, 2010, 42, 2457-2464. | 6.7 | 47 |
| 62 | An online adaptive optimal control strategy for complex building chilled water systems involving intermediate heat exchangers. Applied Thermal Engineering, 2013, 50, 614-628. | 6.0 | 47 |
| 63 | Neural network based prediction method for preventing condensation in chilled ceiling systems. Energy and Buildings, 2012, 45, 290-298. | 6.7 | 44 |
| 64 | Discovering gradual patterns in building operations for improving building energy efficiency. Applied Energy, 2018, 224, 116-123. | 10.1 | 43 |
| 65 | A real-time forecast of tunnel fire based on numerical database and artificial intelligence. Building Simulation, 2022, 15, 511-524. | 5.6 | 43 |
| 66 | Development and validation of an effective and robust chiller sequence control strategy using data-driven models. Automation in Construction, 2016, 65, 78-85. | 9.8 | 42 |
| 67 | Development and validation of a simplified online cooling load prediction strategy for a super high-rise building in Hong Kong. Energy Conversion and Management, 2013, 68, 20-27. | 9.2 | 40 |
| 68 | Building demand response and control methods for smart grids: A review. Science and Technology for the Built Environment, 2016, 22, 692-704. | 1.7 | 40 |
| 69 | Probabilistic approach for uncertainty-based optimal design of chiller plants in buildings. Applied Energy, 2017, 185, 1613-1624. | 10.1 | 40 |
| 70 | Online performance evaluation of alternative control strategies for building cooling water systems prior to in situ implementation. Applied Energy, 2009, 86, 712-721. | 10.1 | 39 |
| 71 | Robust optimal design of district cooling systems and the impacts of uncertainty and reliability. Energy and Buildings, 2016, 122, 11-22. | 6.7 | 39 |
| 72 | Perspectives of big experimental database and artificial intelligence in tunnel fire research. Tunnelling and Underground Space Technology, 2021, 108, 103691. | 6.2 | 39 |

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|---|---|---|---|
| 73 | Real-time forecast of compartment fire and flashover based on deep learning. Fire Safety Journal, 2022, 130, 103579. | 3.1 | 39 |
| 74 | The step-change cooling performance of miniature thermoelectric module for pulse laser. Energy Conversion and Management, 2014, 80, 39-45. | 9.2 | 38 |
| 75 | Sensor Fault Detection and Diagnosis of Air-Handling Units Using a Condition-Based Adaptive Statistical Method. HVAC and R Research, 2006, 12, 127-150. | 0.6 | 35 |
| 76 | In situ performance comparison and evaluation of three chiller sequencing control strategies in a super high-rise building. Energy and Buildings, 2013, 61, 333-343. | 6.7 | 35 |
| 77 | Conjugate heat and mass transfer in a total heat exchanger with cross-corrugated triangular ducts and one-step made asymmetric membranes. International Journal of Heat and Mass Transfer, 2015, 84, 390-400. | 4.8 | 35 |
| 78 | A data analytics-based tool for the detection and diagnosis of anomalous daily energy patterns in buildings. Building Simulation, 2021, 14, 131-147. | 5.6 | 34 |
| 79 | A semi-dynamic model of active pipe-embedded building envelope for thermal performance evaluation. International Journal of Thermal Sciences, 2015, 88, 170-179. | 4.9 | 33 |
| 80 | A data fusion scheme for building automation systems of building central chilling plants. Automation in Construction, 2009, 18, 302-309. | 9.8 | 32 |
| 81 | A dynamic dehumidifier model for simulations and control of liquid desiccant hybrid air conditioning systems. Energy and Buildings, 2017, 140, 418-429. | 6.7 | 26 |
| 82 | A museum storeroom air-conditioning system employing the temperature andÂhumidity independent control device in the cooling coil. Applied Thermal Engineering, 2011, 31, 3653-3657. | 6.0 | 25 |
| 83 | Experimental study on the effect of magnetic field on the heat conductivity and viscosity of ammoniaâ€“water. Energy and Buildings, 2011, 43, 1164-1168. | 6.7 | 24 |
| 84 | Diagnosis of the low temperature difference syndrome in the chilled water system of a super high-rise building: A case study. Applied Energy, 2012, 98, 597-606. | 10.1 | 24 |
| 85 | Mining big building operational data for improving building energy efficiency: A case study. Building Services Engineering Research and Technology, 2018, 39, 117-128. | 1.8 | 24 |
| 86 | A graph mining-based methodology for discovering and visualizing high-level knowledge for building energy management. Applied Energy, 2019, 251, 113395. | 10.1 | 24 |
| 87 | Experimental study on ammonia-water falling film absorption in external magnetic fields. International Journal of Refrigeration, 2010, 33, 686-694. | 3.4 | 23 |
| 88 | Cooling Supply-based HVAC System Control for Fast Demand Response of Buildings to Urgent Requests of Smart Grids. Energy Procedia, 2016, 103, 34-39. | 1.8 | 23 |
| 89 | Performance study of a constant temperature and humidity air-conditioning system with temperature and humidity independent control device. Energy and Buildings, 2012, 49, 640-646. | 6.7 | 20 |
| 90 | The practical performance forecast and analysis of thermoelectric module from macro to micro. Energy Conversion and Management, 2015, 100, 23-29. | 9.2 | 19 |

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|---|---|---|---|
| 91 | Assessment of Building Operational Performance Using Data Mining Techniques: A Case Study. Energy Procedia, 2017, 111, 1070-1078. | 1.8 | 19 |
| 92 | Robust optimal design of building cooling systems concerning uncertainties using mini-max regret theory. Science and Technology for the Built Environment, 2015, 21, 789-799. | 1.7 | 18 |
| 93 | Urban Traffic Prediction through the Second Use of Inexpensive Big Data from Buildings. , 2016, , . | | 18 |
| 94 | Performance Assessment of District Cooling System Coupled with Different Energy Technologies in Subtropical Area. Energy Procedia, 2015, 75, 1235-1241. | 1.8 | 16 |
| 95 | Wetting enhancement of polypropylene plate for falling film tower application. Chemical Engineering and Processing: Process Intensification, 2016, 108, 1-9. | 3.6 | 15 |
| 96 | Analysis of Typical Meteorological Year selection for energy simulation of building with daylight utilization. Procedia Engineering, 2017, 205, 3080-3087. | 1.2 | 13 |
| 97 | Mining Gradual Patterns in Big Building Operational Data for Building Energy Efficiency Enhancement. Energy Procedia, 2017, 143, 119-124. | 1.8 | 12 |
| 98 | Effects of initial mist conditions on simulation accuracy of humidity distribution in an environmental chamber. Building and Environment, 2012, 47, 217-222. | 6.9 | 11 |
| 99 | A simplified physical model-based fault detection and diagnosis strategy and its customized tool for centrifugal chillers. HVAC and R Research, 2013, 19, 283-294. | 0.6 | 11 |
| 100 | Optimization of a liquid desiccant based dedicated outdoor air-chilled ceiling system serving multi-zone spaces. Building Simulation, 2012, 5, 257-266. | 5.6 | 10 |
| 101 | Effects of discharge recirculation in cooling towers on energy efficiency and visible plume potential of chilling plants. Applied Thermal Engineering, 2012, 39, 37-44. | 6.0 | 10 |
| 102 | Effects of different inlet vent positions on the uniformity of humidity inside a building chamber. Energy and Buildings, 2014, 76, 565-571. | 6.7 | 10 |
| 103 | Investigation of the Demand Response Potentials of Residential Air Conditioners Using Grey-box Room Thermal Model. Energy Procedia, 2017, 105, 2759-2765. | 1.8 | 10 |
| 104 | Generation of typical meteorological year for integrated climate based daylight modeling and building energy simulation. Renewable Energy, 2020, 160, 721-729. | 8.9 | 10 |
| 105 | Research and Applications of Data Mining Techniques for Improving Building Operational Performance. Current Sustainable/Renewable Energy Reports, 2018, 5, 181-188. | 2.6 | 9 |
| 106 | An adaptive optimal monthly peak building demand limiting strategy considering load uncertainty. Applied Energy, 2019, 253, 113582. | 10.1 | 9 |
| 107 | Retrofitting building fire service water tanks as chilled water storage for power demand limiting. Building Services Engineering Research and Technology, 2017, 38, 47-63. | 1.8 | 8 |
| 108 | Discovering Complex Knowledge in Massive Building Operational Data Using Graph Mining for Building Energy Management. Energy Procedia, 2019, 158, 2481-2487. | 1.8 | 8 |

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| 109 | District cooling systems and individual cooling systems: Comparative analysis and impacts of key factors. Science and Technology for the Built Environment, 2017, 23, 241-250. | 1.7 | 7 |
| 110 | Experimental investigation of maldistribution in vertical plate falling film tower. Chemical Engineering Communications, 2017, 204, 1237-1245. | 2.6 | 7 |
| 111 | A model-based adaptive method for evaluating the energy impact of low delta-T syndrome in complex HVAC systems using support vector regression. Building Services Engineering Research and Technology, 2016, 37, 573-596. | 1.8 | 6 |
| 112 | Identification of simplified energy performance models of variable-speed air conditioners using likelihood ratio test method. Science and Technology for the Built Environment, 2020, 26, 75-88. | 1.7 | 6 |
| 113 | A study of pre-cooling impacts on peak demand limiting in commercial buildings. HVAC and R Research, 2012, 18, 1098-1111. | 0.6 | 6 |
| 114 | Sensitivity and uncertainty analysis of cooling water control strategies. HVAC and R Research, 2013, 19, 435-443. | 0.6 | 6 |
| 115 | Study on heat and mass transfer characteristics of internally-cooled hollow fiber membrane-based liquid desiccant dehumidifiers. Applied Thermal Engineering, 2022, 212, 118525. | 6.0 | 6 |
| 116 | Energy-efficient decentralized control method with enhanced robustness for multi-evaporator air conditioning systems. Applied Energy, 2020, 279, 115732. | 10.1 | 5 |
| 117 | Evaluation of alternative arrangements of a heat pump system for plume abatement in a large-scale chiller plant in a subtropical region. Energy and Buildings, 2009, 41, 596-606. | 6.7 | 4 |
| 118 | Mining Big Building Operational Data for Building Cooling Load Prediction and Energy Efficiency Improvement. , 2017, , . | | 4 |
| 119 | Performance intensification of regeneration process for non-corrosive plastic plate vertical falling film tower. Applied Thermal Engineering, 2019, 162, 114301. | 6.0 | 4 |
| 120 | A novel modified LiCl solution for three-phase absorption thermal energy storage and its thermal and physical properties. International Journal of Refrigeration, 2021, 130, 44-55. | 3.4 | 4 |
| 121 | Experimental study of dynamic characteristics of liquid desiccant dehumidification processes. Science and Technology for the Built Environment, 2017, 23, 91-104. | 1.7 | 3 |
| 122 | Model-based optimal load control of inverter-driven air conditioners responding to dynamic electricity pricing. Energy Procedia, 2017, 142, 1953-1959. | 1.8 | 3 |
| 123 | Lattice Boltzmann Simulation of Falling Film Flow under Low Reynolds Number. Heat Transfer Engineering, 2018, 39, 1528-1539. | 1.9 | 3 |
| 124 | Performance analysis of absorption thermal energy storage for distributed energy systems. Energy Procedia, 2019, 158, 3152-3157. | 1.8 | 3 |
| 125 | Commissioning of AHU sensors using principal component analysis method. Building Services Engineering Research and Technology, 2003, 24, 179-189. | 1.8 | 2 |
| 126 | Comparison study of air mixing modes in liquid desiccant based all-air air conditioning systems. Building Services Engineering Research and Technology, 2012, 33, 423-435. | 1.8 | 2 |

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|---|---|---|---|
| 127 | A Fault Detection and Diagnosis Method for Low Delta-T Syndrome in a Complex Air-conditioning System. Energy Procedia, 2014, 61, 2514-2517. | 1.8 | 2 |
| 128 | Optimal Design of Active Cool Thermal Energy Storage Concerning Life-cycle Cost Saving for Demand Management in Non-residential Building. Energy Procedia, 2016, 103, 64-69. | 1.8 | 2 |
| 129 | Humidity control for the built environment. Science and Technology for the Built Environment, 2017, 23, 1-1. | 1.7 | 2 |
| 130 | Natural ventilation potential analysis of rural residential buildings in China. , 2011, , . | | 0 |
| 131 | Developing associations between building occupancy and traffic congestion. , 2015, , . | | 0 |
| 132 | The influence of exterior obstruction on the integrated evaluation of daylight utilization during initial design stage. Procedia Engineering, 2017, 205, 2785-2792. | 1.2 | 0 |
| 133 | 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. | 1.7 | 0 |
| 134 | Experimental and theoretical analysis of functional controllability for multi-condenser heat pumps. Applied Thermal Engineering, 2020, 171, 115093. | 6.0 | 0 |
| 135 | Behavior testing of load forecasting models using BuildChecks. , 2022, , . | | 0 |