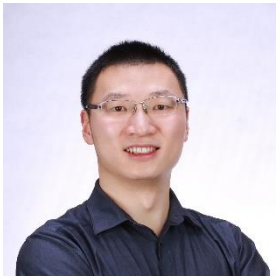
王者



香港科技大学，助理教授
邮箱：cezhewang@ust.hk
电话：(+852) 2358 8753
网站：https://walterzwang.github.io/
地址：学术大楼 3564 室，香港科技大学，清水湾，香港特别行政区

个人简介

王者，香港科技大学土木与环境工程系助理教授，**2021 海外优青**，**2023 港澳优青**，曾任劳伦斯伯克利国家实验室科学家。清华大学本科（双学位，均排名第一），剑桥大学硕士，清华大学博士（导师：朱颖心教授、林波荣教授），美国加州伯克利大学博士后；北京市优秀毕业生（2011，2017）；清华大学首批苏世民学者（2016）、紫荆学者（2017），受邀以**中方唯一青年学者代表**身份在刘延东副总理、克里国务卿主持的第七届中美人文交流高层对话（2016）上发言，曾被纽约时报（New York Times）报道（2016 年 1 月 11 日）。

王者的主要研究方向是未来建筑节能低碳、智慧运维、智能建造技术。面向我国新时期城镇化进程中的节能低碳、智能健康需求，围绕智能建筑的“人员--环境--计算”三要素开展基础原理和创新技术研究，在(1)人员与建筑环境交互模式、交互数据采集与预测新模型；(2)空间环境状态感知与大数据分析；(3)能源与环境系统智能控制优化算法等三方面取得系列创新成果:在行业顶尖期刊发表论文 83 篇，其中第一作者 23 篇，通讯作者 9 篇，共同第一作者 5 篇，ESI 高被引论文 5 篇，Nature 子刊 3 篇。王者现任 SCI 期刊 Energy and Buildings，Building Simulation 以及中文期刊《建筑节能》编委，任 Frontiers in Built Environment 副主编；曾获 **2019 国家科技进步二等奖**，**2018 北京市科学技术一等奖**，2020 华夏建设科学技术一等奖；获香港机电署举办的 2022 国际建筑机电人工智能挑战赛第一名。

工作经历

2021.11 至今 **香港科技大学，助理教授**

- PC，Toward 2060 Carbon Neutrality: Life-cycle Planning and Design of Photovoltaic Integrated Green Roof (PVIGR) Systems for Hong Kong and the Greater Bay Area (346 万港币, 香港研究资助局合作研究项目，C6003-22Y)，2023-2026
- PI, 绿色智慧建筑热环境 (200 万人民币，国家自然科学基金委优秀青年基金（港澳），52322813)，2024-2026
- PI，Model Predictive Control in Hong Kong’s Residential Buildings for Energy Efficiency and Load Flexibility (84 万港币, 香港研究资助局杰出青年学者计划，26209323)，2023-2026
- PI, 基于动态热舒适的电动汽车座舱热环境管理与多目标优化研究 (30 万人民币，国家自然科学基金委青年基金，52306028)，2024-2026
- PI，公共建筑空调系统能效诊断与优化控制研究（80 万人民币，深圳市科委可持续发展科技专项 KCXST20221021111403009），2023-2026
- PI，An AI-assisted solution for low-cost high-resolution urban scale environmental simulation (36 万港币, Fei Chi En Education and Research Fund)，2023-2025
- PI，建筑能源系统模拟与优化研究（30 万人民币，瑞安绿色可持续发展研究基金），2023-2025PI，室内消毒与环境控制智能机器人 (72 万人民币, 佛山市政府课题 SHCIRI-FSNH-2203)，2022-2024
- PI, 电力需求响应软件架构研究 (60 万人民币，美的研发课题)，2022-2023
- PI, 超大型数据中心制冷系统智能化节能方案研究 (30 万人民币，2022 腾讯基础平台技术犀牛鸟专项研究计划)，2022-2023

2018.07-2021.10 **美国劳伦斯伯克利国家实验室，项目科学家**

- co-PI，Reinforcement Learning for Building Control (0.2M USD, 美国 LBNL 课题: BU21-036)
- 核心研究者，Integrating Sensor Data with Physics-Based Models (1.5M USD, 美国能源部课题: EE-5B37579)
- 主要研究者，Hierarchical Occupancy Responsive MPC (3.0M USD, 美国能源部课题: EE-5B24502)

017.10-2018.06 **加州伯克利大学，博士后研究员**

- 核心研究者，Personalized Wearable Comfort Devices (0.5M USD，美国 NSF 课题)

2016.12-2018.06 **世界银行，能源咨询专家**

- 世界银行&住建部：中国城市建筑节能和可再生能源应用项目，咨询专家

教育经历

2011.08-2017.07 **清华大学，建筑技术，博士**

- 哈佛大学访问学者，2015
- 获得：*国家奖学金* (2012)，*清华大学综合优秀奖学金* (2012, 2015)，*波音奖学金* (2015)，*北京建筑设计院优秀学生奖学金* (2016)，*北京市优秀毕业生* (2017)，*建筑学院优秀博士论文* (2017)
- 共青团清华大学建筑学院委员会书记，2011-2013

2016.08-2017.07 **清华大学苏世民书院，公共政策，硕士**

- 受邀在 2016 年第七轮中美人文交流高层磋商全体会议（由中国副总理刘延东和美国国务卿克里主持）上发言，唯一中国青年学者代表
- 学生自治委员会成员 (110 名学生中选举产生 12 名)

2013.10-2014.09 **剑桥大学，能源技术，硕士**

- 获得：*Wing Yip 奖学金* (每年 3 人)

2008.09-2011.07 **清华大学，经济学，学士**

- 平均绩点 92.8/100, 排名 **1** / 126

2007.09-2011.07 **清华大学，土木工程，学士**

- 平均绩点 91.3/100, 排名 **1** / 29
- 获得：*国家奖学金* (2009, 2010)，*波音奖学金* (2011)，*北京市优秀毕业生* (2011)，*清华大学优秀毕业生* (2011)，*优秀学位论文* (2011)
- 清华大学学生网络电视台台长，2010-2011

开源软件

MPCPy	Python-based open-source platform for model predictive control in buildings https://github.com/lbl-srg/MPCPy
Modelica Buildings Library	Dynamic simulation models for building energy and control systems https://github.com/lbl-srg/modelica-buildings

学术服务

期刊编委	*Energy and Buildings,* **Section Editor** *in Intelligent Building and Smart Control* *Building Simulation*, **Subject Editor** in *Building Control* *Frontiers in Built Environment*， **Associate Editor** *Building Energy Conservation,* **Editorial Board Member**
基金评委	*The Dunhill Medical Trust, UK, 2020* *MTR Research Funding Scheme, HK, 2023*
会议组织	Chair, *Jiangsu-Hong Kong-Macao University Alliance Seminar on Smart City and Green Building*, 2023 Member of Technical Program Committee, *International Workshop on Reinforcement Learning for Energy Management in Buildings & Cities (RLEM)*, https://rlem-workshop.net/, 2020, 2021, 2023 Member of Scientific Committee, *the 13th International Symposium on Heating, Ventilation and Air-conditioning*, 2023
期刊审稿人	*Nature Energy, Applied Energy, Energy, Building and Environment, Energy and Building, Journal of Building Engineering, Building Simulation, Environmental Science and Pollution*

Research, Science and Technology for the Built Environment, SoftwareX, Journal of Building Performance Simulation, Applied Thermal Engineering, Advanced Engineering Informatics, Frontiers in Built Environment, International Journal of Biometeorology, Journal of Asian Architecture and Building Engineering, Journal of the Taiwan Institute of Chemical Engineer, Sustainable Cities and Society, Engineering

获奖

1. 《绿色公共建筑环境与节能设计关键技术研究与应用》，2019 国家科学技术进步二等奖，证书号：2019-J-22101-2-01-R09
2. 2022 国际建筑机电人工智能挑战赛一等奖，香港机电署，学生第一作者，本人通讯作者（奖金 20 万港币）
3. 《绿色公共建筑环境与节能设计关键技术研究与应用》，2018 北京市科学技术一等奖
4. 《公共建筑室内环境智能监控和节能关键技术研究》，2020 华夏建设科学技术一等奖

人才称号

1. 港澳优青，2023
2. 海外优青，2021
3. 乔治布什总统基金会 Fellow，2021
4. 清华大学紫荆学者，2017
5. 清华大学苏世民学者，2016

专利

1. **王者**，一种智能温控器和智能温控器的控制方法，中国专利申请号：202210667572.X，初审合格
2. 林波荣、赵海淞、**王者**, 一种用于洗碗机的热回收装置，中国专利号: ZL 201320328067.9

学术文章

谷歌学术引用: 4367; h-index: 37; i10-index: 66; ESI 高被引论文: 5

(#: 共同第一作者; *: 通讯作者)

1. **Wang, Z.*** and He, Y., 2023. AlphaHydrogen: A virtual platform for simulating and evaluating station-based regional hydrogen-electricity networks with distributed renewables, buildings, and fuel-cell vehicles. Energy Conversion and Management, 280, p.116802.
2. **Wang, Z.***, 2022. How frequent should we measure the indoor thermal environment. Building and Environment, 222, p.109464.
3. **Wang, Z.**, Chen, B., Li, H. and Hong, T., 2021. AlphaBuilding ResCommunity: A multi-agent virtual testbed for community-level load coordination. Advances in Applied Energy, 4, p.100061.
4. **Wang, Z.**, Hong, T. and Li, H., 2021. Informing the planning of rotating power outages in heat waves through data analytics of connected smart thermostats for residential buildings. Environmental Research Letters, 16(7), p.074003.
5. **Wang, Z.**, Hong, T., Li, H. and Piette, M.A., 2021. Predicting city-scale daily electricity consumption using data-driven models. Advances in Applied Energy, 2, p.100025.
6. **Wang, Z.** and Hong, T., 2020. Reinforcement Learning for Building Controls: The opportunities and challenges. Applied Energy, 269, p.115036. (highly cited paper)
7. **Wang, Z.**, Hong, T. and Piette, M.A., 2020. Building thermal load prediction through shallow machine learning and deep learning. Applied Energy, 263, p.114683. (highly cited paper)
8. **Wang, Z.** and Hong, T., 2020. Learning occupants' indoor comfort temperature through a Bayesian inference approach for office buildings in United States. Renewable and Sustainable Energy Reviews, 119, p.109593.
9. **Wang, Z.** and Hong, T., 2020. Generating realistic building electrical load profiles through the Generative Adversarial Network (GAN). Energy and Buildings, p.110299.

10. **Wang, Z.**, Hong, T., Piette, M.A. and Pritoni, M. 2019, Inferring occupant counts from Wi-Fi data in buildings through machine learning, Building and Environment, 158, pp. 281-294.
11. **Wang, Z.**, Parkinson, T., Li, P., Lin, B. and Hong, T., 2019. The Squeaky wheel: Machine learning for anomaly detection in subjective thermal comfort votes. Building and Environment, 151, pp.219-227.
12. **Wang, Z.**, Zhang, H., He, Y., Luo, M., Li, Z., Hong, T. and Lin, B., 2020. Revisiting individual and group differences in thermal comfort based on ASHRAE database. Energy and Buildings, 219, p.110017.
13. **Wang, Z.**, Wang, J., He, Y., Liu, Y., Lin, B. and Hong, T., 2020. Dimension analysis of subjective thermal comfort metrics based on ASHRAE Global Thermal Comfort Database using machine learning. Journal of Building Engineering, 29, p.101120.
14. **Wang, Z.**, Hong, T. and Piette, M.A., 2019. Predicting plug loads with occupant count data through a deep learning approach. Energy, 181, pp.29-42.
15. **Wang, Z.**, Warren, K., Luo, M., He, X., Zhang, H., Arens, E., Chen, W., He, Y., Hu, Y., Jin, L. and Liu, S., 2019. Evaluating the comfort of thermally dynamic wearable devices. Building and Environment, p.106443.
16. **Wang, Z.**, Hong, T. and Piette, M.A., 2019. Data fusion in predicting internal heat gains for office buildings through a deep learning approach. Applied Energy, 240, pp.386-398.
17. **Wang, Z.**, Hong, T. and Jia, R., 2018. Buildings. Occupants: a Modelica package for modelling occupant behaviour in buildings. Journal of Building Performance Simulation, pp.1-12.
18. **Wang, Z.**, Luo, M., Geng, Y., Lin, B. and Zhu, Y., 2018. A model to compare convective and radiant heating systems for intermittent space heating. Applied Energy, 215, pp.211-226.
19. **Wang, Z.**, de Dear, R., Luo, M., Lin, B., He, Y., Ghahramani, A. and Zhu, Y., 2018. Individual difference in thermal comfort: A literature review. Building and Environment, 138, pp. 181-193 (highly cited paper)
20. **Wang, Z.**, Zhao, Z., Lin, B., Zhu, Y. and Ouyang, Q., 2015. Residential heating energy consumption modeling through a bottom-up approach for China's Hot Summer–Cold Winter climatic region. Energy and Buildings, 109, pp.65-74.
21. **Wang, Z.**, Zhao, H., Lin, B., Zhu, Y., Ouyang, Q. and Yu, J., 2015. Investigation of indoor environment quality of Chinese large-hub airport terminal buildings through longitudinal field measurement and subjective survey. Building and Environment, 94, pp.593-605.
22. **Wang, Z.**, de Dear, R., Lin, B., Zhu, Y. and Ouyang, Q., 2015. Rational selection of heating temperature set points for China's hot summer–Cold winter climatic region. Building and Environment, 93, pp.63-70.
23. **Wang, Z.**, Lin, B. and Zhu, Y., 2015. Modeling and measurement study on an intermittent heating system of a residence in Cambridgeshire. Building and Environment, 92, pp.380-386.
24. Liu, S.*[,#], **Wang, Z.***[,#], Schiavon, S., He, Y., Luo, M., Zhang, H. and Arens, E., 2020. Predicted percentage dissatisfied with vertical temperature gradient. Energy and Buildings, p.110085.
25. Wang, J.[#], **Wang, Z.**[#], Zhou, D. and Sun, K., 2019. Key issues and novel optimization approaches of industrial waste heat recovery in district heating systems. Energy, p.116005.
26. Wang, J.[#], **Wang, Z. ***[,#], de Dear, R., Luo, M., Ghahramani, A. and Lin, B., 2018. The uncertainty of subjective thermal comfort measurement. Energy and Buildings, 181, pp.38-49.
27. Liu, Y.[#], **Wang, Z.**[#], Lin, B., Hong, J. and Zhu, Y., 2018. Occupant satisfaction in Three-Star-certified office buildings based on comparative study using LEED and BREEAM. Building and Environment, 132, pp.1-10.
28. Touzani, S.[#], Prakash, A.K.[#], **Wang, Z.**[#], Agarwal, S., Pritoni, M., Kiran, M., Brown, R. and Granderson, J., 2021. Controlling distributed energy resources via deep reinforcement learning for load flexibility and energy efficiency. Applied Energy, 304, p.117733.
29. Ju, Y., **Wang, Z.***, Ju, X., Cao, B., Chen, C. and Lin, B., 2023. Understanding occupancy patterns of university libraries in the post-pandemic era. Energy and Buildings, 291, p.113138.
30. Luo, M., **Wang, Z.***, Ke, K., Cao, B., Zhai, Y. and Zhou, X., 2018. Human metabolic rate and thermal comfort in buildings: The problem and challenge. Building and Environment, 131, pp. 44-52
31. Wu, Z., Cheng, J.C., **Wang, Z.*** and Kwok, H.H., 2023. An ontology-based framework for automatic building energy modeling with thermal zoning. Energy and Buildings, p.113267.
32. Zhong, H., Guo, M., Wang, Y. and **Wang, Z.***, 2023. Quantify the magnitude and energy impact of overcooling in a sub-tropical campus building. Building and Environment, p.110033.

33. Wang, D., Zheng, W., **Wang, Z.***, Wang, Y., Pang, X. and Wang, W., 2023. Comparison of reinforcement learning and model predictive control for building energy system optimization. Applied Thermal Engineering, 228, p.120430.
34. Zhou, Q., Zhong, H., Li, L. and **Wang, Z.***, 2023, February. AlphaMobileSensing: A virtual testbed for mobile environmental monitoring. In Building Simulation (pp. 1-14). Beijing: Tsinghua University Press.
35. Wang, Y., Wang, X., Zheng, L., Gao, X., **Wang, Z.***, You, S., Zhang, H. and Wei, S., 2023. Thermo-hydraulic coupled analysis of long-distance district heating systems based on a fully-dynamic model. Applied Thermal Engineering, 222, p.119912.
36. Wang, D., Chen, Y., Wang, W., Gao, C. and **Wang, Z.***, 2023. Field test of Model Predictive Control in residential buildings for utility cost savings. Energy and Buildings, 288, p.113026.
37. Wang, D., Li, M., Guo, M., Shi, Q., Zheng, C., Li, D., Li, S. and **Wang, Z.***, 2023. Modelling Variable Refrigerant Flow System for Control Purpose. Energy and Buildings, p.113163.
38. Jung, W., **Wang, Z.**, Hong, T. and Jazizadeh, F., 2023. Smart thermostat data-driven US residential occupancy schedules and development of a US residential occupancy schedule simulator. Building and Environment, p.110628.
39. Blum, D., **Wang, Z.**, Weyandt, C., Kim, D., Wetter, M., Hong, T. and Piette, M.A., 2022. Field demonstration and implementation analysis of model predictive control in an office HVAC system. Applied Energy, 318, p.119104.
40. Kim, D., **Wang, Z.**, Brugger, J., Blum, D., Wetter, M., Hong, T. and Piette, M.A., 2022. Site demonstration and performance evaluation of MPC for a large chiller plant with TES for renewable energy integration and grid decarbonization. Applied Energy, 321, p.119343.
41. Luo, N., **Wang, Z.**, Blum, D., Weyandt, C., Bourassa, N., Piette, M.A. and Hong, T., 2022. A three-year dataset supporting research on building energy management and occupancy analytics. Scientific Data, 9(1), p.156.
42. Wang, M., **Wang, Z.**, Geng, Y. and Lin, B., 2022. Interpreting the neural network model for HVAC system energy data mining. Building and Environment, 209, p.108449.
43. Pinto, G., **Wang, Z.**, Roy, A., Hong, T. and Capozzoli, A., 2022. Transfer learning for smart buildings: A critical review of algorithms, applications, and future perspectives. Advances in Applied Energy, p.100084.
44. Li, H., **Wang, Z.** and Hong, T., 2021. A synthetic building operation dataset. Scientific data, 8(1), pp.1-13.
45. Li, H., **Wang, Z.**, Hong, T. and Piette, M.A., 2021. Energy Flexibility of Residential Buildings: A Systematic Review of Characterization and Quantification Methods and Applications. Advances in Applied Energy, p.100054.
46. Li, H., **Wang, Z.**, Hong, T., Parker, A. and Neukomm, M., 2021. Characterizing patterns and variability of building electric load profiles in time and frequency domains. Applied Energy, 291, p.116721.
47. Li, H., **Wang, Z.** and Hong, T., 2021. Occupant-Centric key performance indicators to inform building design and operations. Journal of Building Performance Simulation, pp.1-29.
48. Hong, T., **Wang, Z.**, Luo, X. and Zhang, W., 2020. State-of-the-art on research and applications of machine learning in the building life cycle. Energy and Buildings, p.109831. (highly cited paper)
49. Jiang, Y., **Wang, Z.**, Lin, B. and Mumovic, D., 2020. Development of a health data-driven model for a thermal comfort study. Building and Environment, p.106874.
50. Liu, Y., **Wang, Z.**, Zhang, Z., Hong, J. and Lin, B., 2018. Investigation on the Indoor Environment Quality of health care facilities in China. Building and Environment, 141, pp. 273-287
51. Luo, M., **Wang, Z.**, Zhang, H., Arens, E., Filingeri, D., Jin, L., Ghahramani, A., Chen, W., He, Y. and Si, B., 2020. High-density thermal sensitivity maps of the human body. Building and Environment, 167, p.106435.
52. Luo, M., **Wang, Z.**, Brager, G., Cao, B. and Zhu, Y., 2018. Indoor climate experience, migration, and thermal comfort expectation in buildings. Building and Environment, 141, pp. 262-272
53. Lin, B., **Wang, Z.**, Sun, H., Zhu, Y. and Ouyang, Q., 2016. Evaluation and comparison of thermal comfort of convective and radiant heating terminals in office buildings. Building and Environment, 106, pp.91-102.
54. Lin, B., **Wang, Z.**, Liu, Y., Zhu, Y. and Ouyang, Q., 2016. Investigation of winter indoor thermal environment and heating demand of urban residential buildings in China's hot summer–Cold winter climate region. Building and Environment, 101, pp.9-18.
55. Perera, A.T.D., Zhao, B., **Wang, Z.**, Soga, K. and Hong, T., 2023. Optimal design of microgrids to improve wildfire resilience for vulnerable communities at the wildland-urban interface. Applied Energy, 335, p.120744.
56. Yuan, Y., Chen, Z., **Wang, Z.**, Sun, Y. and Chen, Y., 2023. Attention mechanism-based transfer learning model for day-

ahead energy demand forecasting of shopping mall buildings. Energy, 270, p.126878.
57. Su, Y., Cheng, H., **Wang, Z.**, Yan, J., Miao, Z. and Gong, A., 2023. Analysis and prediction of carbon emission in the large green commercial building: A case study in Dalian, China. Journal of Building Engineering, 68, p.106147.
58. Su, Y., Cheng, H., **Wang, Z.** and Wang, L., 2022. Impacts of the COVID-19 lockdown on building energy consumption and indoor environment: A case study in Dalian, China. Energy and Buildings, 263, p.112055.
59. Guo, X., Lee, K., **Wang, Z.** and Liu, S., 2021. Occupants' satisfaction with LEED-and non-LEED-certified apartments using social media data. Building and Environment, p.108288.
60. He, Y., Zhou, Y., **Wang, Z.**, Liu, J., Liu, Z. and Zhang, G., 2021. Quantification on fuel cell degradation and techno-economic analysis of a hydrogen-based grid-interactive residential energy sharing network with fuel-cell-powered vehicles. Applied Energy, 303, p.117444.
61. Chen, B., Jin, M., **Wang, Z.**, Hong, T. and Bergés, M., 2020, November. Towards Off-policy Evaluation as a Prerequisite for Real-world Reinforcement Learning in Building Control. In Proceedings of the 1st International Workshop on Reinforcement Learning for Energy Management in Buildings & Cities (pp. 52-56).
62. Hong, T., Chen, C.F., **Wang, Z.** and Xu, X., 2020. Linking human-building interactions in shared offices with personality traits. Building and Environment, 170, p.106602.
63. Jiang, Y., Luo, Z., **Wang, Z.** and Lin, B., 2019. Review of thermal comfort infused with the latest big data and modeling progresses in public health. Building and Environment, 164, p.106336.
64. He, Y., Chen, W., **Wang, Z.** and Zhang, H., 2019. Review of fan-use rates in field studies and their effects on thermal comfort, energy conservation, and human productivity. Energy and Buildings, 194, pp. 140-162.
65. Geng, Y., Ji, W., **Wang, Z.**, Lin, B. and Zhu, Y., 2018. A review of operating performance in green buildings: Energy use, indoor environmental quality and occupant satisfaction. Energy and Buildings. 183, pp.500-514. (highly cited paper)
66. Lin, B., Liu, Y., **Wang, Z.**, Pei, Z. and Davies, M., 2016. Measured energy use and indoor environment quality in green office buildings in China. Energy and Buildings, 129, pp.9-18.
67. Cho, B., Dayrit, T., Gao, Y., **Wang, Z.**, Hong, T., Sim, A. and Wu, K., 2020, December. Effective Missing Value Imputation Methods for Building Monitoring Data. In 2020 IEEE International Conference on Big Data (Big Data) (pp. 2866-2875). IEEE.
68. He, Y., Arens, E., Li, N., **Wang, Z.**, Zhang, H., Yongga, A. and Yuan, C., 2020. Modeling solar radiation on a human body indoors by a novel mathematical model. Building and Environment, p.107421.
69. Wang, Z., Yu, H., Luo, M., **Wang, Z.**, Zhang, H. and Jiao, Y., 2019. Predicting older people's thermal sensation in building environment through a machine learning approach: Modelling, interpretation, and application. Building and Environment, 161, p.106231.
70. Wang, J., Hua, J., Fu, L., **Wang, Z.** and Zhang, S., 2019. A theoretical fundamental investigation on boilers equipped with vapor-pump system for Flue-Gas Heat and Moisture Recovery. Energy, 171, pp.956-970.
71. Luo, M., Ke, Z., Ji, W., **Wang, Z.**, Cao, B., Zhou, X. and Zhu, Y., 2019. The time-scale of thermal comfort adaptation in heated and unheated buildings. Building and Environment, 151, pp.175-186.
72. Geng, Y., Yu, J., Lin, B., **Wang, Z.** and Huang, Y., 2017. Impact of individual IEQ factors on passengers' overall satisfaction in Chinese airport terminals. Building and Environment, 112, pp.241-249.
73. Li, H., Hou, H.C., Gou, Z., Wong, M.S. and **Wang, Z.**, 2023. Computer vision-based smart HVAC control system for university classroom in a subtropical climate. Building and Environment, p.110592.
74. Liu, Y., Li, H., Zheng, P., Wu, H., **Wang, Z.**, Li, Z. and Lin, B., 2023. Non-invasive measurements of thermal discomfort for thermal preference prediction based on occupants' adaptive behavior recognition. Building and Environment, 228, p.109889.
75. Tang, H., Yu, J., Lin, B., Geng, Y., **Wang, Z.**, Chen, X., Yang, L., Lin, T. and Xiao, F., 2023. Airport terminal passenger forecast under the impact of COVID-19 outbreaks: A case study from China. Journal of Building Engineering, 65, p.105740.
76. He, Y., Zhou, Y., Yuan, J., Liu, Z., **Wang, Z.** and Zhang, G., 2021. Transformation towards a carbon-neutral residential community with hydrogen economy and advanced energy management strategies. Energy Conversion and Management, 249, p.114834.
77. Chen, C.F., De Simone, M., Yilmaz, S., Xu, X., **Wang, Z.**, Hong, T. and Pan, Y., 2021. Intersecting heuristic adaptive

strategies, building design and energy saving intentions when facing discomfort environment: A cross-country analysis. Building and Environment, 204, p.108129.

78. Li, Z., Lin, B., Zheng, S., Liu, Y., **Wang, Z.** and Dai, J., 2020, August. A review of operational energy consumption calculation method for urban buildings. Building Simulation, Vol. 13, No. 4, pp. 739-751
79. Hong, T., Macumber, D., Li, H., Fleming, K. and **Wang, Z.**, 2020, June. Generation and representation of synthetic smart meter data. Building Simulation, Vol. 13, No. 4, pp. 1205–1220
80. Ghahramani, A., Galicia, P., Lehrer, D., Varghese, Z., **Wang, Z.** and Pandit, Y., 2020. Artificial Intelligence for Efficient Thermal Comfort Systems: Requirements, Current Applications and Future Directions. Frontiers in Built Environment, 6.
81. Luo, M., Arens, E., Zhang, H., Ghahramani, A. and **Wang, Z.**, 2018. Thermal comfort evaluated for combinations of energy-efficient personal heating and cooling devices. Building and Environment, 143, pp.206-216.
82. Taylor, J., Liu, Y., Lin, B., Burman, E., Hong, S.M., Yu, J., **Wang, Z.**, Mumovic, D., Shrubsole, C., Vermeer, D. and Davies, M., 2018. Towards a framework to evaluate the 'total'performance of buildings. Building Services Engineering Research and Technology, p.0143624418762662.
83. Dong, B., Liu, Y., Mu, W., Jiang, Z., Pandey, P., Hong, T., Olesen, B., Lawrence, T., O'Neil, Z., Andrews, C. and Azar, E.,…, **Wang, Z.** … 2022. A global building occupant behavior database. Scientific data, 9(1), p.369.

Last Updated: Aug. 24, 2023