

Huiying Hou
Assistant Professor
Department of Building Environment and Energy Engineering
Email: cynthia.hou@polyu.edu.hk



Biography

Cynthia Hou has been engaged in research on facilities management in both the private and public sectors. Her research focuses include post-occupancy evaluation, workplace management, strategic facilities management, and heritage adaptive reuse and revitalisation. Recently, she has leveraged smart technologies in her research by investigating smart hotels, smart heritage facilities management, and virtual reality (VR) technologies applications in built environment education. She seeks to investigate efficient and sustainable built environment management strategies from a facilities management perspective. She is also keen on adopting digitalisation approaches in her research, with an aim to delineating the dynamics among people, facilities and space in the built environment and exploring data-driven solutions for facilities management problems in society.

Cynthia is a member of the Royal Institution of Chartered Surveyors and the programme leader for the Master Programme in Facilities Management, the Hong Kong Polytechnic University.

Research outputs

Spatiotemporal analysis and forecasting of PV systems, battery storage, and EV charging diffusion in California: A graph network approach

Lan, H., Hou, C., Gou, Z. & Wong, M. S., Sept 2024, In: *Renewable Energy*. 230, 120868.

A machine learning led investigation to understand individual difference and the human-environment interactive effect on classroom thermal comfort

Lan, H., Hou, H. & Gou, Z., 15 May 2023, In: *Building and Environment*. 236, 110259.

Student residential apartment performance evaluation using integrated AHP-FCE method

Hou, H., Wang, Y. & Lan, H., 15 May 2023, In: *Journal of Building Engineering*. 67, 106000.

An exploratory analysis of low-carbon transitions in China's construction industry based on multi-level perspective

Xu, P., Wang, Y., Yao, H. & Hou, H., May 2023, In: *Sustainable Cities and Society*. 92, 104460.

Project-based learning and pedagogies for virtual reality-aided green building education: case study on a university course

Hou, H., Lai, J. H. K. & Wu, H., 9 Feb 2023, In: *International Journal of Sustainability in Higher Education*.

Qualitative and quantitative investigation into the indoor built environment of modular student housing: A multiple-room case study

Cynthia Hou, H., Zhang, D. & Lai, J. H. K., 1 Feb 2023, In: *Energy and Buildings*. 280, 112734.

Machine vision-based smart HVAC control system for university classroom in subtropical climate

Lan, H., Hou, C., Gou, Z., Wong, M. S. & Wang, Z., 2023, In: *Building and Environment*.

Understanding the relationship between urban morphology and solar potential in mixed-use neighborhoods using machine learning algorithms

Lan, H., Gou, Z. & Hou, C., Dec 2022, In: *Sustainable Cities and Society*. 87, 104225.

An analytic network process model for hospital facilities management performance evaluation

Lai, H. K., Hou, C., Edwards, D. J. & Yuen, P. L., 21 Feb 2022, In: *Facilities*. 40, 5/6, p. 333-352 20 p.

Importance of hospital facilities management performance indicators: Building practitioners' perspectives

Lai, J. H. K., Hou, H., Chiu, B. W. Y., Edwards, D., Yuen, P. L., Sing, M. & Wong, Y. L. P., Jan 2022, In: *Journal of Building Engineering*. 45, 103428.

