

LI Jiayu (Dr)

PhD (Heating, Ventilating and Air Conditioning), Tianjin University

BEng (Building Environment and Equipment Engineering), Chongqing University



Assistant Professor
Department of the Built Environment
College of Design and Engineering
National University of Singapore
4 Architecture Drive
Singapore 117566
Email: jy.li@nus.edu.sg
Telephone: +65 6516 5349
Mobile: +65 8941 2112 (WhatsApp)
Office: E4-05-13

ACADEMIC QUALIFICATIONS

- PhD in Heating, Ventilating and Air Conditioning, Tianjin University (2019), including joint doctoral training at RWTH Aachen University, Germany (2017–2018)
- BEng in Building Environment and Equipment Engineering, Chongqing University (2013)

EMPLOYMENT RECORD

- Assistant Professor, Department of the Built Environment, National University of Singapore (2026–present)
- Assistant Professional Researcher (2025–2026) and Postdoctoral Scholar (2023–2025), Center for the Built Environment, University of California, Berkeley
- Senior Principal Research Officer, Environmental Health Institute, National Environment Agency, Singapore (2023)
- Senior Research Fellow (2022) and Postdoctoral Scholar (2018–2022), Berkeley Education Alliance for Research in Singapore (BEARS)

PROFESSIONAL ACTIVITIES

- Member, International Society of Indoor Air Quality and Climate (ISIAQ)
- International Scientific Committee, Indoor Air 2026; Session Chair, Aerosols and Particulate Matter, Indoor Air 2024
- Editorial Board Member, *Buildings*; Guest Editor for *Atmosphere*, *Sensors*, and *Frontiers in Built Environment*
- Reviewer for ~30 journals, including *Environmental Science & Technology*, *Environment International*, *Building and Environment*, and *Energy & Buildings*

AWARDS / HONOURS

- Best Paper Award, 12th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings (IAQVEC 2026)
- Outstanding Project Achievement Award, SinBerBEST (2021)
- Outstanding Young Scientist Award, SinBerBEST (2021)
- Outstanding Contribution in Reviewing, *Building and Environment*, Elsevier (2018)
- National Scholarship for PhD Students, Ministry of Education, China (2016)

GRADUATE TEACHING

- BPS5234 CFD Applications in the Built Environment

RESEARCH INTERESTS

- Indoor air quality: aerosols, bioaerosols, and gas-phase pollutants; air cleaning and low-cost sensing
- Low-energy cooling for the tropics: elevated air movement, radiant cooling, and natural ventilation
- Experimental and computational fluid dynamics of indoor airflows (particle image velocimetry, CFD)
- Healthy buildings: human exposure assessment, airborne infection control, and climate resilience

SELECTED PUBLICATIONS

A full list of publications can be found on [Google Scholar](#).

- Parkinson, T.; Bhangar, S.; Chan, W. R.; Chen, W.; Gilligan, B.; Kramer, T.; Li, J.; Miller, C.; Oaks, L.; Thind, M.; & Licina, D. (2026). Ten questions concerning low-cost indoor air quality sensors: perspectives from research and practice. *Building and Environment*, 114737.
- Fan, Y.; Liu, J.; Shang, W.; & Li, J. (2025). Analysis of time- and size-resolved fluorescent biological aerosol particles in a subway station. *Atmospheric Environment*, 350, 121142.
- Li, J.; Zhao, H.; Russell, M.; Delp, W. W.; Walker, I. S.; & Singer, B. C. (2024). Air pollutant exposure concentrations from cooking a meal with a gas or induction cooktop and the effectiveness of two recirculating range hoods with filters. *Indoor Environments*, 1(4), 100047.
- Li, J.; Zuraimi, S.; & Schiavon, S. (2024). Should we use ceiling fans indoors to reduce the risk of transmission of infectious aerosols? *Indoor Environments*, 1(3), 100039.
- Li, J.; Pantelic, J.; Merchant, C. B.; Chen, K. W.; Izuhara, I.; Meggers, F. M.; & Schiavon, S. (2024). Comparison of the environmental, energy, and thermal comfort performance of air and radiant cooling systems in a zero-energy office building in Singapore. *Energy and Buildings*, 318, 114487.
- Li, J.; Yang, J.; Unni, B.; Yap, R.; Lim, J. T.; Ng, L. C.; & Sim, S. (2024). A case-control study of behavioural and built environment determinants of COVID-19 transmission in open-air markets and food centres in Singapore. *Building and Environment*, 264, 111909.
- Liu, J.; Liu, J.; & Li, J. (2024). PIV experimental study on natural convective flows at high Rayleigh numbers in industrial buildings. *Building and Environment*, 256, 111460.
- Li, J.; Zuraimi, S.; Schiavon, S.; Wan, M. P.; Xiong, J.; & Tham, K. W. (2022). Diurnal trends of indoor and outdoor fluorescent biological aerosol particles in a tropical urban area. *Science of the Total Environment*, 848, 157811.
- Li, J.; & Tartarini, F. (2020). Changes in air quality during the COVID-19 lockdown in Singapore and associations with human mobility trends. *Aerosol and Air Quality Research*, 20(8), 1748–1758.
- Li, J.; Wan, M. P.; Schiavon, S.; Tham, K. W.; Zuraimi, S.; Xiong, J.; Fang, M.; & Gall, E. (2020). Size-resolved dynamics of indoor and outdoor fluorescent biological aerosol particles in a bedroom: A one-month case study in Singapore. *Indoor Air*, 30(5), 942–954.
- Li, J.; Liu, J.; Pei, J.; Mohanarangam, K.; & Yang, W. (2018). Experimental study of human thermal plumes in a small space via large-scale TR PIV system. *International Journal of Heat and Mass Transfer*, 127, 970–980.
- Li, J.; Liu, J.; Wang, C.; Wesseling, M.; & Müller, D. (2017). PIV experimental study of the large-scale dynamic airflow structures in an aircraft cabin: Swing and oscillation. *Building and Environment*, 125, 180–191.