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PhD (Civil Engineering), University of Toronto

MSc (HVAC Engineering), BSc (Building Environment and Energy), Tongji University



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ACADEMIC QUALIFICATIONS

- PhD in Civil Engineering, University of Toronto (2022)
- MSc in HVAC Engineering, Tongji University (2018)
- BSc in Building Environment and Energy, Tongji University (2015)

EMPLOYMENT RECORD

- Assistant Professor, Department of the Built Environment, National University of Singapore (2027–present)
- Postdoctoral Research Scientist, School of Architecture, Civil and Environmental Engineering, EPFL, Switzerland (2022–2027)

PROFESSIONAL ACTIVITIES

- Member (2017 –), International Society of Indoor Air Quality and Climate (ISIAQ).
- Member (2018 –), The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Technical Committee 2.4 member.
- Participant (2022 –) , IEA EBC Annex 95.

AWARDS / HONOURS

- Wiley Top Cited Article (2022)
- Canada Ontario Trillium Scholarship (2018 – 2022)
- Chinese National Scholarship - Graduate Level (2017)

GRADUATE TEACHING

- BPS5222 Indoor Environmental Quality

RESEARCH INTERESTS

- Health and cognitive impacts of indoor air quality
- Building Ventilation and Air Cleaning
- Machine Learning for Buildings

SELECTED PUBLICATIONS

B Du, I Reda, D Licina, C Kapsis, D Qi, JA Candanedo, T Li. Estimating air change rate in mechanically ventilated classrooms using a single CO₂ sensor and automated data segmentation. *Environmental Science & Technology*. 2024; 58 (42), 18788–18799.

B Du, B Gabriel, D Licina. Exploring indoor environmental perception through questionnaires, physiological monitoring, and facial expression recognition. *Indoor Environments*. 2024; 100019.

B Du, JA Siegel. Estimating indoor pollutant loss using mass balances and unsupervised clustering to recognize decays. *Environmental Science & Technology*. 2023; 57 (27), 10030-10038.

B Du, H Schwartz-Narbonne, MC Tandoc, EM Hefferman, ML Mack, JA Siegel. The impact of emissions from an essential oil diffuser on cognitive performance. *Indoor Air*. 2022; 32.

B Du, MC Tandoc, ML Mack, JA Siegel. Indoor CO₂ concentrations and cognitive function: A critical review. *Indoor Air*. 2020; 30(6): 1067-82.

B Du, J Gao, J Chen, S Stevanovic, Z Ristovski, L Wang, L Wang. Particle exposure level and potential health risks of domestic Chinese cooking. *Building and Environment*. 2017; 123: 564-74.