

## Assistant Professor (Research) WANG, QUN

Department of Environmental Science and Engineering, Faculty of Innovation Engineering  
Macau University of Science and Technology



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### Academic Qualification:

**Ph.D. in Department of Mechanical Engineering, University of Hong Kong**

**Master in Sun Yat-sen University**

**Bachelor in Sun Yat-sen University**

### Teaching Area

Urban Environment

Atmospheric Environment

Air Quality

### Research Area

High-resolution Urban Thermal Environment

Climate Change Impact on Urban Environment

Building Engineering of Infection Control (Especially ventilation)

### Working Experience

Assistant Professor, Department of Environmental Science and Engineering, Faculty of Innovation Engineering, MUST (Sep. 2024-)

Post-doc Fellow, Department of Geography and Resource Management, The Chinese University of Hong Kong (Jan. 2023-Jul. 2024)

Post-doc Fellow, Department of Mechanical Engineering, The University of Hong Kong (Sep. 2020-Dec. 2022)

### Academic Publication ( selected )

Wang, Q., Chen, Y., Lu, X., Chen, G., Li, Z., Cai, M., ... & Fung, J. C. (2024). Urbanization impact on meteorological condition and O<sub>3</sub> concentration under past and future climates scenarios over the Greater Bay Area in Southern China. *Atmospheric Environment*, 331, 120585.

Wang, Q., Chen, Y., Fung, T., Li, Z., Huang, Y., Wong, M. M. F., & Lu, X. (2023). Effect of land surface parameters on meteorology and ozone air quality simulations in the Great Bay Area, China. *Atmospheric Environment*, 315, 120146.

Wang, Q., Lung, D. C., Chan, P. T., Dung, C. H., Jia, W., ... Yuen, K. Y., Li, Y. (2022). High attack rate in a Tong Lau house outbreak of COVID-19 with subdivided units in Hong Kong. *Interface Focus*, 12(2), 20210063.

Wang, Q., Lin, Z., Niu, J., Choi, G. K. Y., Fung, J. C., Lau, A. K., ... & Li, Y. (2022). Spread of SARS-CoV-2 aerosols via two connected drainage stacks in a high-rise housing outbreak of COVID-19. *Journal of Hazardous Materials*, 430, 128475.

Wang, Q., Li, Y., Lung, D. C., Chan, P. T., Dung, C. H., Jia, W., ... Yuen, K. Y. (2022). Aerosol transmission of SARS-CoV-2 due to the chimney effect in two high-rise housing drainage stacks. *Journal of Hazardous Materials*, 421, 126799.

Wang, H., Wang, Q., Yang, X., Chen, T., Lam, C. K. C., Zhang, M., Hang, J. (2021). Steady and unsteady turbulent flows and pollutant dispersion in 2D street canyons with novel boundary conditions and various Re numbers.

Urban Climate, 39, 100973.

Wang, D. Y, Shi, Y. R., Chen, G. W., Zeng, L. Y., Hang, J., Wang, Q. (2021). Urban thermal environment and surface energy balance in 3d high-rise compact urban models: scaled outdoor experiments. *Building and Environment*, 205, 108251.

Wang, Q., Hang, J., Fan, Y., Li, Y. (2020). Urban plume characteristics under various wind speed, heat flux, and stratification conditions. *Atmospheric Environment*, 239, 117774.

Wang, Q., Zhang, C., Ren, C., Hang, J., Li, Y. (2020). Urban heat island circulations over the Beijing-Tianjin region under calm and fair conditions. *Building and Environment*, 107063.

Yang, H., Chen, T., Lin, Y., Buccolieri, R., Mattsson, M., Zhang, M., Hang, J., Wang, Q. (2020). Integrated impacts of tree planting and street aspect ratios on CO dispersion and personal exposure in full-scale street

### Professional Certification and Awards

Chief Executive's Commendation for Community Service, Hong Kong SAR, China, 2022

Best Thesis Award, Department of Mechanical Engineering, The University of Hong Kong, 2020

Hong Kong PhD Fellowship Scheme (HKPFs), Hong Kong SAR, China, 2016

China National Scholarship for postgraduate, China, 2015

The First-prize Scholarship for postgraduate, Sun Yat-sen University (2014, 2015)