Qilong Zhong

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EDUCATION：

PhD Candidate in Mechanical Engineering, The University of Hong Kong (HKU) 2021-Now

Supervisors: Prof. Jiyun Song, Prof. Yuguo Li

BSc in Mechanics, Southern University of Science and Technology (SUSTech) 2017-2021

Supervisor: Prof. Yu Liu

JOURNAL PUBLICATIONS：

1. **Qilong Zhong**, Jiyun Song*, Dachuan Shi, Chung-Hin Dung. (2023). Protective facemask-induced facial thermal stress and breathing burden during exercise in gyms. Building and Environment, 110840. https://doi.org/10.1016/j.buildenv.2023.110840.

2. Dachuan Shi, Jiyun Song*, **Qilong Zhong**, Soe W. Myint, Peng Zeng, Yue Che. (2024). Cooling wisdom of 'water towns': How urban river networks can shape city climate? Remote Sensing of Environment, 113925. https://doi.org/10.1016/j.rse.2023.113925.

CONFERENCE PAPERS & PRESENTATIONS：

1. **Qilong Zhong**, Jiyun Song*, Xiaoxue Wang, and Yuguo Li. Modelling of urban lake breeze circulation: the implications on urban heat island mitigation. Oral presentation. EGU General Assembly 2024. Apr. 14-19, Vienna, Austria. https://doi.org/10.5194/egusphere-egu24-4289.

2. **Qilong Zhong**, Jiyun Song*, Dachuan Shi. Protective facemask-induced facial thermal stress and breathing burden during exercise in gyms. Oral presentation. Healthy Buildings Europe 2023. Jun. 11-14, Aachen, Germany.

3. Jiyun Song*, Dachuan Shi, **Qilong Zhong**. How do urban river networks regulate city climate? A case study in Shanghai, China. EGU General Assembly 2024. Apr. 14-19, Vienna, Austria. https://doi.org/10.5194/egusphere-egu24-2965.

PROJECT EXPERIENCE：

1. RGC (17298912) project: Development of a protective facemask-inclusive human thermal stress prediction and warning system. (HKU) 2021-2023

My contribution: We proposed a hybrid experiment–modeling framework for the comprehensive examination of the effects of PFMs on thermal and breathing comfort. The framework provide insight into healthy exercise with PFMs in the gym and offer implications for the development of mask design.

2. Synergistic cooling effects of water and trees for tackling overheating of megacities in Southern China. (HKU) 2022-2023

My contribution: To investigate the synergistic cooling mechanism of urban blue and green spaces at different spatiotemporal scales, we performed fixed monitoring of air/surface thermal parameters in diurnal cycles in Shanghai and Hongkong. We perform mobile monitoring of air/surface thermal parameters via bicycles/cars in Shanghai.

3. Urban lake breeze circulation: the implications on urban heat island mitigation. (HKU, WHU) 2023-Now

My contribution: We developed an enhanced multiscale water-energy coupled CFD model. Our newly developed CFD model will be used to study the impact of built-up area characteristics, lake characteristics and atmospheric stability on the atmospheric dynamics of urban boundary layer and urban thermal comfort as an implication of urban design.

➢ TEACHING EXPERIENCE:

Teaching Assistant (HKU) 2021-2024

MECH6026: Computational Fluid Dynamics; MECH3408: Mechanics of Fluids; ENVM8013: Dispersion modelling for air quality prediction.

Experiments demonstrator (HKU) 2021-2024

MECH2414: Thermofluids; MECH3408: Mechanics of Fluids.

➢ HONOURS AND AWARDS:

Postgraduate Scholarship (HKU) 2021-2025

Third-class Scholarship (SUSTech) 2020

Second-class Scholarship (SUSTech) 2019

Second-class Scholarship (SUSTech) 2018

➢ CAPABILITIES OF PROGRAMMING AND INDUSTRIAL SOFTWARE:

Java, Python, Matlab, Fluent, CATIA, Solidworks, Tecplot