

# Han Wang

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HKUST, Clear Water Bay Road, Sai Kung, NT, Hong Kong

## Education

**The Hong Kong University of Science and Technology (HKUST), Hong Kong** 2021–2025  
Ph.D. in Civil and Environmental Engineering (Advisor: Prof. Jiachuan Yang)

**Hohai University (HHU), Nanjing, China** 2017–2021  
B.Sc. in Environmental Science

## Experience

**The Hong Kong University of Science and Technology (HKUST), Hong Kong** 2025–present  
Postdoctoral Fellow, Civil and Environmental Engineering (Advisor: Prof. Hui Su)

## Interests

Scientific Machine Learning; Urban Hydrometeorology and Climatology; Spatiotemporal Prediction; Regional and Urban Climate Modeling; Extreme Events.

## Publications

1. Wang, H., & Yang, J. (2025). Skillful Urban Air Temperature Forecast System with Multimodal Deep Learning Framework. In preparation.
2. Wang, H., & Yang, J. (2025). Leveraging atmospheric information across scales for local temperature forecasting using a novel multi-scale perception network. Under review.
3. Wang, H., Tang, J., Zhang, J., & Yang, J. (2026). Intra-city scale graph neural networks enhance short-term air temperature forecasting. *Atmospheric Chemistry and Physics*, 26(2), 947–961.
4. Wang, H., Zhang, J., & Yang, J. (2024). Time-series forecasting of pedestrian-level urban air temperature by LSTM: Guidance for practitioners. *Urban Climate*, 56, 102063.
5. Chen, X., Wang, H., & Yang, J. (2024). Effect of green blue spaces on the urban thermal environment: A field study in Hong Kong. *Urban Climate*, 55, 101912.
6. Wang, H., Yang, J., Chen, G., Ren, C., & Zhang, J. (2023). Machine learning applications on air temperature prediction in the urban canopy layer: A critical review of 2011–2022. *Urban Climate*, 49, 101499.

## Presentations and Conferences

- Wang, H., Yang, J. *Multimodal Deep Learning Framework for Urban Air Temperature Forecasting: Bridging Local and Synoptic Scales* (Oral), EGU2025 CL5.9, Vienna, Austria, May 2025.
- Wang, H., Yang, J. *Skillful Urban Air Temperature Forecast System with Multimodal Deep Learning Framework* (Poster), AGU2024 GC41I-0061, Washington, D.C., USA, Nov 2024.
- Wang, H., Yang, J. *Enhancing Urban Air Temperature Forecast with City-scale Graph Neural Networks* (Oral), AOGS2024 AS91-A015, Pyeongchang-gun, South Korea, Jun 2024.
- Wang, H., Zhang, J., Yang, J. *Time-series forecasting of urban air temperature by LSTM: Implications for practitioners* (Oral), ICUC 11th, Sydney, Australia, Aug 2023.
- Wang, H., Yang, J. *Machine Learning on Canopy Layer Air Temperature Prediction: Status and Baseline* (Keynote), The 9th National Urban Meteorology Conference, Xiongan, China, May 2023.

## Honors and Awards

- RedBird Academic Excellence Award, HKUST (2025)
- Travel Grant, The Abdus Salam International Centre for Theoretical Physics (2025)
- Research Travel Grant, HKUST (2023, 2024, 2025)
- Outstanding Undergraduate Final Thesis, HHU (2021)
- Excellent Student of HHU (2021)
- Scholarship for Academic Excellence and Academic Progress, HHU (2019, 2020, 2021)
- Scholarship for International Exchange (UK), HHU (2018)

## Teaching

### Graduate Teaching Assistant, HKUST

- CIVL 4910 Undergraduate Final Year Project (2021–2025)
- CIVL 2510 Fluid Mechanics
- CIVL 2910 Fundamental of Green Buildings
- CIVL 4480 Climate Modeling and Risk Assessment

## Professional Services

Reviewer: *Environmental Research Letters*; *Geophysical Research Letters (GRL)*; *Sustainable Cities and Society*; *Urban Climate*; *Advances in Atmospheric Sciences*; *Meteorological Applications*

## Professional Membership

- European Geosciences Union (EGU), member since 2025
- American Geophysical Union (AGU), member since 2024
- International Association for Urban Climate (IAUC), member since 2023

## Skills

**Languages:** English (fluent), Chinese (native)

**Programming:** Python (PyTorch), MATLAB (Urban Canopy Model)

## Extracurricular Activities

- Tutor for Undergraduate Students, Hall 1, HKUST (2023–2025)
- Vice President, Volunteer Teaching Association (Zhihe), HHU (2019–2020)
- Campus Ambassador, Teach for China, Lead Foundation (2018–2020)

## Referees

- Prof. Hui Su (Postdoc. Advisor), Chair Professor, HKUST, cehsui@ust.hk
- Prof. Jiachuan Yang (Ph.D. Advisor), Associate Professor, HKUST, cejcyang@ust.hk
- Prof. Jize Zhang (Collaborator), Assistant Professor, HKUST, cejize@ust.hk