Junjie Yu

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Education

2023–26*	**Ph.D.**, Environmental Sciences, The University of Manchester
2020-23	**M.S.**, Environmental Engineering, Research Center for Eco-Environmental Sciences
2016-20	**B.Eng.**, Environmental Engineering, China University of Mining and Technology-Beijing

Awards & Honors

2023.09	Significant Contributor in City Brain Open Research - Open Data Computing Workshop on Urban Climate
2022.06	National Scholarship for Graduate Students (the highest honor for postgraduates in China, 3%)
2020.06	Excellent Graduates in Beijing (5%)
2019.06	Special-Class Award in Beijing Energy and Water Conservation Low Carbon Emission Reduction Social Practice and Technology Competition
2018.12	Second Prize in Beijing Chemistry Experiment Competition
2017.11	First Prize in National University Student Mathematics Competition

Projects

2023.10	Unpacking the Dual Impacts of Dynamic Urban Land Change and Internal Climate Variability on Local Urban Climate (Co-investigator)

Publications

Google Scholar
† → Equal contribution

Journal Articles

J1. Sun, H., Jiao, R., **Yu, Junjie** & Wang, D. Combined effects of particle size and humic acid corona on the aggregation kinetics of nanoplastics in aquatic environments. *Science of the Total Environment* **901** (2023).

*Expected.

J2. Sun, H., Jiao, R., Yang, Q., **Yu, Junjie** & Wang, D. Aggregation and settling characteristics of particulate matter and DOM in a southern China reservoir: Influence of hydraulic conditions and dosing methods. *Process Safety and Environmental Protection* **166,** 500–511 (2022).

J3. Wang, Z., Xu, H., **Yu, Junjie**, Zhao, C. & Wang, D. Effect of particulate matter on coagulation process and ultrafiltration membrane contamination. *Zhongguo Huanjing Kexue/China Environmental Science* **42,** 4621–4630 (2022).

J4. **Yu, Junjie**, Jiao, R., Sun, H., Xu, H., He, Y. & Wang, D. Removal of microorganic pollutants in aquatic environment: The utilization of Fe(VI). *Journal of Environmental Management* **316** (2022).

J5. **Yu, Junjie**, Xu, H., Sun, H., Jin, Z.-Y. & Wang, D.-S. Mechanism on the effects of floc aging and pH adjustment on reflux feed water and coagulation. *Zhongguo Huanjing Kexue/China Environmental Science* **42,** 4612–4620 (2022).

J6. **Yu, Junjie**, Xu, H., Wang, D., Sun, H., Jiao, R., Liu, Y., Jin, Z. & Zhang, S. Variations in NOM during floc aging: Effect of typical Al-based coagulants and different particle sizes. *Water Research* **218** (2022).

J7. **Yu, Junjie**, Xu, H., Yang, X., Sun, H., Jin, Z. & Wang, D. Floc formation and growth during coagulation removing humic acid: Effect of stirring condition. *Separation and Purification Technology* **302** (2022).

J8. Li, M., Xu, H., Wang, D., Wang, X. & **Yu, Junjie**. Comparison of the effect of AlCl3 and Al13 on sludge conditioning in water supply plant. *Chinese Journal of Environmental Engineering* **15,** 1075–1082 (2021).

Tools & Software

Data sciences

Google Colab: AutoML for observational weather data.

obswx: A Python package for accessing observational meteorological data (PyPi | GitHub).

Climate modeling

pyclmuapp: Integration and Execution of Community Land Model Urban (CLMU) in a Containerized Environment (PyPi | GitHub).

CLMU-App: Enabling Operating System Independent Urban Climate Simulations (GitHub).

Presentations

Talks

T1. **Junjie Yu**. *Integration and Execution of Community Land Model Urban (CLMU) in a Containerized Environment* Centre for Atmospheric Science seminar. Jan. 2025.

T2. **Junjie Yu**. *Pyclmuapp: A Python Package for Quick Use of Community Land Model Urban.* NERC's Digital Gathering 2024. Aug. 2024.

T3. **Junjie Yu**. *Towards urban climate digital twins: a containerized urban climate model. (Travel funded).* Transforming Urban Living with AI and Digital Twins. Nov. 2024.

T4. **Junjie Yu**. *Reinforcement Learning for Earth and Environmental Sciences.* The Group Meeting of Machine Integration and Learning for Earth Systems of Computational Information Systems Laboratory (CISL) of The National Center for Atmospheric Research (NCAR). Nov. 2023.

Posters

P1. Zhonghua Zheng **Junjie Yu**, K. O. & Zhao, L. *Projections of Global Urban Heat Waves Empowered by Machine Learning.* 4th UK National Climate Impacts Meeting. Aug. 2024.

P2. Kuang Wang **Junjie Yu**, Z. L. & Zheng, Z. *Leverage a Cloud-based Big Data Processing Platform for Climate Extremes Research.* AGU Fall Meeting 2023 Abstract. Dec. 2023.

Teaching

The University of Manchester

2025.01	Graduate Teaching Assistant, EART11200 The Natural Scientists Toolkit
2025.01	Graduate Teaching Assistant, EART60702 Earth and Environmental Data Science 2023-24 2nd Semester
2024.08	Lecturer, Observational weather data processing and automated machine learning for weather data modeling for the exchange program of undergraduate students from the School of Earth Sciences, Zhejiang University, China

Academic Advising

Undergraduate

2023	Kuang Wang, Zhejiang University (Biosystems Engineering) -> PhD (Computer Science) at The Chinese University of Hong Kong, Shenzhen

Training

2025	AWS Workshop on Cloud Research & Teaching Tools, The University of Manchester, Manchester, UK
2023	Training of SQL and could computing, Yunqi Academy of Engineering, Hangzhou, China

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Last updated: February 2, 2025