

魏忠旺 教授，博导

✉ zhongwang007@gmail.com

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本人主要涉及陆水循环及其相伴生的生态、大气循环耦合等领域的研究。主要从事水体-大气的水汽交换的观测与模拟工作；稳定水汽同位素的观测，模拟与应用方面的研究。现阶段主要开展陆面过程模式 CoLM 开发研究工作。开设或参与包括地球系统科学概论、水文学基础、地球水循环、水文气象灾害等本科课程；科学计算及数据可视化和陆面水文模型基本原理与应用等研究生课程。

研究经历

- 2025.3 – 至今 教授大气科学学院，中山大学
- 2021.3 – 至今 客座副研究员 Institute of Industrial Science, The University of Tokyo (日本东京大学)
- 2019.9 – 2025.3 百人引进副教授大气科学学院，中山大学
- 2019.6 – 2019.12 助理研究员 Soil and Terrestrial Environmental Physics Group, Institute of Biogeochemistry and Pollutant Dynamics, ETH Zurich (瑞士苏黎世联邦理工学院)
- 2018.4 – 2019.6 项目研究员 River and Environmental Engineering Laboratory, Department of Civil Engineering, The University of Tokyo (日本东京大学)
- 2016.4 – 2018.3 博士后研究员 Yale School of Forestry & Environmental Studies, Yale University (美国耶鲁大学)
- 2013.4 – 2016.3 研究助手 Atmosphere and Ocean Research Institute, The University of Tokyo (日本东京大学)
- 2011.4 – 2013.3 研究助手 Graduate School of Life and Environmental Sciences, University of Tsukuba (日本筑波大学)

教育经历

- 2013.4 – 2016.3 博士 东京大学, 日本 - 自然环境学专攻
博士论文: *Study on Atmospheric and Terrestrial Water Circulation Processes Using Stable Water Isotopes.*
- 2011.4 – 2013.3 硕士 筑波大学, 日本 - 地球科学专攻
硕士论文: *Estimation of Surface Fluxes Using Bulk Transfer Methods over Lake Surface: An Example of Lake Kasumigaura.*
- 2003.9 – 2007.6 学士 解放军后勤工程学院, 中国 - 油气储运工程
学士论文: 民航白塔机场输油管线设计 (优秀毕业论文)。

论文专著

论文

- 1 Dong, W., Yuan, H., Lin, W., Liu, Z., Xiang, J., Wei, Z., ... Dai, Y. (2025). A global urban tree leaf area index dataset for urban climate modeling. *Scientific Data*, 12(1), 426.
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- 5 Liu, S., Zeng, X., Dai, Y., Yuan, H., Wei, N., Wei, Z., ... Brunke, M. A. (2025). Optimal coupling height of the atmosphere and land surface—an earth system modeling perspective. *Advances in Atmospheric Sciences*, 42(3), 417–426.
- 6 Shi, G., Sun, W., Shangguan, W., Wei, Z., Yuan, H., Li, L., ... Dai, Y. (2025). A china dataset of soil properties for land surface modelling (version 2, csdlv2). *Earth System Science Data*, 17(2), 517–543. doi:10.5194/essd-17-517-2025
- 7 Shi, J., Yuan, H., Lin, W., Dong, W., Liang, H., Liu, Z., ..., Wei, Z. et al. (2025). A flux tower site attribute dataset intended for land surface modeling. *Earth System Science Data*, 17(1), 117–134.
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- 12 Bai, F., Wei, Z., Wei, N., Lu, X., Yuan, H., Zhang, S., ... Dai, Y. (2024). Global assessment of atmospheric forcing uncertainties in the common land model 2024 simulations. *Journal of Geophysical Research: Atmospheres*, 129(23), e2024JD041520. e2024JD041520 2024JD041520. doi:https://doi.org/10.1029/2024JD041520
- 13 Bong, H., Cauquoin, A., Okazaki, A., Chang, E.-C., Werner, M., Wei, Z., ... Yoshimura, K. (2024). Process-based intercomparison of water isotope-enabled models and reanalysis nudging effects. *Journal of Geophysical Research: Atmospheres*, 129(1), e2023JD038719.
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- 19 Li, L., Dai, Y., Wei, Z., Shangguan, W., Wei, N., Zhang, Y., ... Li, X.-X. (2024). Enhancing deep learning soil moisture forecasting models by integrating physics-based models. *Advances in Atmospheric Sciences*, 1–16.
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- 24 Peng, L., Sheffield, J., Wei, Z., Ek, M. & Wood, E. F. (2024). An enhanced standardized precipitation–evapotranspiration index (spei) drought-monitoring method integrating land surface characteristics. *Earth System Dynamics*, 15(5), 1277–1300. doi:10.5194/esd-15-1277-2024
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专著

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荣誉及项目

荣誉

2024-2025	大气人物, 中山大学大气科学学院 魅力教师, 中山大学大气科学学院
2023-2024	魅力教师, 中山大学大气科学学院
2022-2022	魅力教师, 中山大学大气科学学院
2021-2025	广东省珠江学者引进青年拔尖人才计划
2015-2016	新领域科学研究科优秀学生奖, 东京大学新领域科学研究科
2014-2015	学术研究奖, 东京大学新领域科学研究科 内田优秀学生奖, 内田海洋基金, 东京大学大气海洋研究所
2011-2015	日本留学生支援机构 JASSO 奖学金, 日本文部省

项目

2025-2028	陆面模式基准评价系统开发, 国家自然科学基金面上项目, 主持, 49 万元
2020-2024	基于非结构网格的三维陆面水文模式研制, 国家自然科学基金面上项目, 主持, 59 万元
2020-2020	气候变化对东北地区农业格局的影响, 辽宁省发展和改革委员会项目, 主持, 20 万元
2023-2025	陆面模式冠层截留方案研制, 广东省面上项目, 主持, 20 万元
2020-2024	地球系统数值模拟装置项目 (地区系统模式数值模拟系统), 中国科学院计算机网络信息中心项目, 参与

荣誉及项目 (continued)

2021-2025	高分辨率陆面环境模拟与预测研究, 广东省科学技术厅省科技创新战略专项资金, 参与
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