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See my academic pages at https://nuistqqw.github.io/ or https://www.researchgate.net/profile/Guanjie-Jiao

Education

PhD Student in Atmospheric Science (Atmospheric Environment and Atmospheric Chemistry), School of Atmospheric Sciences, Nanjing University *(NJU)*, Nanjing, China *2025-*

B.S. (Honours Degree) in Atmospheric Science, School of Environmental Science and Engineering, Nanjing University of Information Science & Technology *(NUIST)*, Nanjing, China *2021-2025*

H.S., Anyang No.1 Middle School in Henan Province, Anyang, China *2018-2021*

Awards and Honors

National Scholarship *2023*

President Scholarship of the NUIST (Highest Scholarship in the NUIST) *2023, 2024*

Zhang Jijia Meteorological Elite Scholarship *2024*

First Prize in Atmospheric Academic and Technological Innovation Competition *2024*

Second Prize in the China Undergraduate Life Sciences Contest *2023*

Merit Student in Jiangsu Province *2023*

Excellent Award in *"Sharing Cup"* Innovation Competition of Science and Technology Resources Sharing Service *2023*

National Students' Platform for Innovation and Entrepreneurship Training Program *2023*

Second Prize in the University Student Science and Technology Innovation Contest on Low-carbon & Recirculation *2022*

Third Prize in Jiangsu Province Higher Mathematics Competition *2022*

Merit Student in NUIST *2022-2025*

Outstanding Students Leader in NUIST *2022*

First Class Scholarship in NUIST *2022*

Research Interests

- Development of numerical model: Feedback process (Aerosol radiation feedback, ARF) and chemical mechanisms (Heterogeneous Chemistry of HONO, Cloud Water Chemistry of Sulfur)
- The interaction between air quality and land surface ecology
- The application of Artificial Intelligence (AI) in meteorology

Publications

Manuscript in preparation:

Jiao, G., Zhu, X., Li, X., Dong, X., Li, D., He, K., & Qiu, R. *(under review)*. The uneven change of global expanding summer over the past 50 years. *Atmospheric Research*.

Wang, X., Zhu, J., **Jiao, G.**, et al. *(Discussion in EGUsphere)*. Meteorological Influence on Long-term Trends of Surface Ozone in China: Uncertainty Analysis. *Atmospheric Chemistry and Physics*.

Pubulished:

Jiao, G., Chen, L., Li, K., Zhu, J., Dong, X., Yang, Y., Yue, X., & Liao, H. (2025). Worsened ozone pollution exacerbates the loss of agricultural production in China. *Journal of Geophysical Research: Atmospheres*, 130, e2024JD042781.

Jiao, G., Shentu, X., Zhu, X., Song, W., Song, Y., & Yang, K. (2022). Utility of deep learning algorithms in initial flowering period prediction models. *Agriculture*, 12(12), 2161.

Zhu, X., **Jiao, G.**, Li, Q., & Qiu, R. (2025). Benefits for inversion of long-term satellite daily air temperature based on multi-machine learning algorithms. *Atmospheric Research*, 108217.

Zhu, X., Li, Q., Zeng, Y., **Jiao, G.**, Gu, W., Qiu, X., & Wumaer, A. (2023). Refined Spatialization of 10-Day Precipitation in China Based on GPM IMERG Data and Terrain Decomposition Using the BEMD Algorithm. *Journal of Meteorological Research*, 37(5), 690-709.

Presentations

Jiao, G., Chen, L., and Zhu, J.: Assessment of ozone-induced crop yield loss and its uncertainty in China over 2013-2100, *poster presentation*, The second National Doctoral Conference on Atmospheric Environmental Chemistry, Nanjing, China, August 2023.

Jiao, G., Chen, L., Zhu, J., Li, K., Yang, Y., Yue, X., and Liao, H.: Food crisis in China caused by ozone exposure: historical and future assessment, uncertainty, and trends based on multi-metrics, *poster presentation*, 2024 CUHK EASC Summer Workshop, Hong Kong, China, August 2024.

Jiao, G., Chen, L., Zhu, J., Li, K., Yang, Y., Yue, X., and Liao, H.: Worsened ozone pollution exacerbates the loss of agricultural production in China, *oral presentation*, The 6th Young Talents Forum on Atmospheric and Environmental Science, Nanjing, China, August 2024.

Jiao, G., Zhu, X., Li, Q., and Qiu, R.: Benefits for inversion of long-term daily air temperature based on STA machine learning algorithm and AVHRR, *poster presentation*, The 2nd National Defense Highland Forum, Changsha, China, October, 2024.

Hosted project

Research on prediction model for initial flowering period based on artificial intelligence algorithms, National Students' Platform for Innovation and Entrepreneurship Training Program, 2022-2023