Hui Wang

✉: huiw16@uci.edu

Employment

- **Nanjing University**, Jiang Su, China 2026.6-
  Incoming Assistant Professor, Nanjing–Helsinki Institute in Atmospheric and Earth System Sciences
- **University of California, Irvine**, CA, USA 2024.9- 2026.5
  Postdoc researcher

Education

- **University of California, Irvine**, CA, USA 2019.9- 2024.8
  PhD in Earth System Science
- **Beijing Normal University**, Beijing, China 2015.9- 2018.7
  M.Sc. in Global Environment Change
- **He Fei University of Technology**, He Fei, China 2011.9- 2015.7
  B.Sc. in Geographic Information Science

Research Interests

- Biosphere-Atmosphere Chemical Interactions; Urban Air Quality; High Latitude Ecosystem; Earth System Model.

Awards

- ***Outstanding Graduate Student Research Award*** in the Department of Earth System Science, UCI (2024)
- ***Future Investigators*** in NASA Earth and Space Science and Technology (FINESST, 2023)
- ***Diversity, Equity and Inclusion (DEI) Graduate Leaders Fellowship*** in University of California Irvine (2023)

Community Involvement

- UCI-ESS Diverse Educational Community and Doctoral Experience (DECADE) representative
- **Session Chair, AGU 2025 Fall Meeting**
- Reviewer for ***U.S. National Science Foundation Postdoctoral Program.***
- Reviewer for ***Nature Communications***, ***Environmental Science & Technology***, ***ES & T Air, Geophysical Research Letters***, ***Geoscientific Model Development, Journal of Geophysical Research: Biogeosciences, Atmospheric Environment, Atmospheric Chemistry and Physics, Biogeosciences, and Urban Greening & Urban Forestry.***
- UCI-ESS Graduate/Undergrade Student mentor
  Mentees: Trinity S. McGinnis, Christopher A. Leong, Jared Novelly, Christina K. Ho, Viridiana M. Ruiz, Yu Ye, Ashley Chao

Publications

- Tang, J, **Wang, H**, Li, T, Cai, Z, Guenther, A, Olsson, P-O, Schurgers, G, Rieksta J, He, C, Tang, W, Borchmann, RL, Rinnan, R: Moth Effect: Herbivore-induced plant volatiles disturb weather patterns (co-first author, under revision on ***Science***).
- **Wang, H.**, Nagalingam, S., Welch, A. M., Leong, C., Czimczik, C. I., & Guenther, A. B. (2024). Heat waves may

trigger unexpected surge in aerosol and ozone precursor emissions from sedges in urban landscapes. ***Proceedings of the National Academy of Sciences***, 121(45), e2412817121.

- **Wang, H.,** Welch, A. M., Nagalingam, S., Leong, C., Czimczik, C. I., Tang, J., Seco, R., Rinnan, R., Vettikkat, L., Schobesberger, S., Holst, T., Brijesh, S., Sheesley, R. J., Barsanti, K. C., and Guenther, A. B. (2024). High temperature sensitivity of Arctic isoprene emissions explained by sedges, ***Nature Communications***, 15, 6144, 10.1038/s41467-024-49960-0.
- **Wang, H.**, Welch, A., Nagalingam, S., Leong, C., Kittitananuvong, P., Barsanti, K. C., et al. (2024). Arctic heatwaves could significantly influence the isoprene emissions from shrubs. ***Geophysical Research Letters***, 51, e2023GL107599. https://doi.org/10.1029/2023GL107599
- **Wang, H.**, Lu, X., Seco, R., Stavrakou, T., Karl, T., Jiang, X., Gu, L., and Guenther, A. (2022). Modeling isoprene emission response to drought and heatwaves within MEGAN using evapotranspiration data and by coupling with the Community Land Model. ***Journal of Advances in Modeling Earth Systems***, 14, e2022MS003174. https://doi.org/10.1029/2022MS003174.
- **Wang, H.**, Wu, Q., Guenther, A. B., Yang, X., Wang, L., Xiao, T., Li, J., Feng, J., Xu, Q., and Cheng, H. (2021). A long-term estimation of biogenic volatile organic compound (BVOC) emission in China from 2001–2016: the roles of land cover change and climate variability, ***Atmospheric Chemistry and Physics***, 21, 4825-4848, https://doi.org/10.5194/acp-21-4825-2021.
- **Wang, H.**, Lin, J., Wu, Q., Chen, H., Tang, X., Wang, Z., Chen, X., Cheng, H., and Wang, L. (2019). MP CBM-Z V1.0: design for a new Carbon Bond Mechanism Z (CBM-Z) gas-phase chemical mechanism architecture for next-generation processors, ***Geoscientific Model Development***, 12, 749–764, https://doi.org/10.5194/gmd-12-749-2019.
- **Wang, H.**, Wu, Q., Liu, H., Wang, Y., Cheng, H., Wang, R., Wang, L., Xiao, H., and Yang, X. (2018). Sensitivity of biogenic volatile organic compound emissions to leaf area index and land cover in Beijing, ***Atmospheric Chemistry and Physics***, 18, 9583-9596, https://doi.org/10.5194/acp-18-9583-2018.
- **Wang, H.**, Chen, H., Wu, Q., Lin, J., Chen, X., Xie, X., Wang, R., Tang, X., and Wang, Z. (2017). GNAQPMS v1.1: accelerating the Global Nested Air Quality Prediction Modeling System (GNAQPMS) on Intel Xeon Phi processors, ***Geoscientific Model Development***, 10, 2891-2904, https://doi.org/10.5194/gmd-10-2891-2017.
- Katz, E. F., Arata, C. M., Pfannerstill, E. Y., Weber, R. J., Ng, D., Milazzo, M. J., Byrne, H., **Wang, H.**, Guenther, A. B., Rey-Sanchez, C., Apte, J., Baldocchi, D. D., and Goldstein, A. H.: Biogenic and anthropogenic contributions to urban terpenoid fluxes, ***Atmos. Chem. Phys.***, 25, 15281–15299, 2025.
- Bourtsoukidis, E., Guenther, A., **Wang, H.**, Economou, T., Lazoglou, G., Christodoulou, A., Christoudias, T., Nölscher, A., Yañez-Serrano, A.M. and Peñuelas, J. (2025), Environmental Change Is Reshaping the Temperature Sensitivity of Sesquiterpene Emissions and Their Atmospheric Impacts. ***Global Change Biology***, 31: e70258. https://doi.org/10.1111/gcb.70258
- Welch, A. M., Matthews, T., Sheesley, R. J., **Wang, H.**, Barsanti, K. C., Nielsen, N., et al. (2025). Summertime carbonaceous aerosols in interior versus coastal Northern Alaska. ***Journal of Geophysical Research: Atmospheres***, 130, e2024JD042080. https://doi.org/10.1029/2024JD042080
- Wang, Y., Chen, H., Wu, Q., Chen, X., **Wang, H.**, Gbaguidi, A., Wang, W., and Wang, Z. (2018). Three-year, 5 km resolution China PM2.5 simulation: Model performance evaluation, ***Atmospheric Research***, 207, 1-13,

https://doi.org/10.1016/j.atmosres.2018.02.016.

- Nagalingam, S., **Wang, H**., Kim, S., & Guenther, A. B. (2024). Unexpectedly strong heat stress induction of monoterpene, methylbutenol, and other volatile emissions for conifers in the cypress family (Cupressaceae). ***The Science of the total environment***, 177336.
- Wong, G., **Wang, H.,** Park, M., Park, J., Ahn, J.-Y., Sung, M., Choi, J., Park, T., Ban, J., Kang, S., Lee, T., Kim, J., Seo, B.-K., Yu, J.-H., Kim, J., Woo, J.-H., and Kim, S. (2024). Optimizing an airborne mass-balance methodology for accurate emission rate quantification of industrial facilities: A case study of industrial facilities in South Korea, ***Science of The Total Environment***, 912, 169204, https://doi.org/10.1016/j.scitotenv.2023.169204.

Conferences

- Gordon Conference: Biogenic Hydrocarbons and the Atmosphere (GRS) and Biogenic Hydrocarbons and the Atmosphere, Oxnard, California, US (Talk).
- 2024 American Geophysical Union (AGU) Annual Fall Meeting, Washington, D.C., US. (Poster)
- 2023 American Geophysical Union (AGU) Annual Fall Meeting, San Francisco, California, US. (Poster)
- 2021 American Geophysical Union (AGU) Annual Fall Meeting, New Orleans, Louisiana, US. (Poster)