

He-Ming Xiao (肖鹤鸣)

Website: <https://hm-xiao.mystrikingly.com/>



Backgrounds

I earned my Ph.D. under the supervision of Prof. [Min-Hui Lo](#) at National Taiwan University. I received solid training that equipped me with a strong understanding of both modeling tools and atmospheric dynamics. I am proficient in using regional model (WRF) and variable-resolution model (MPAS). I also have experience in Earth system modeling, including modifying the Community Land Model (CLM) code and conducting high-resolution regional CLM simulations. Additionally, I have worked on nudging sea surface temperature (SST) in the POP ocean model within CESM1.

My background in atmospheric dynamics covers tropical climate variability such as ENSO and IOD, as well as midlatitude dynamics, including diagnostics of barotropic Rossby waves. I am also well-versed in land-atmosphere interactions.

Education

Ph.D. Atmospheric Sciences, Jun. 2024, National Taiwan University

B.S. Atmospheric Sciences, Jun. 2018, Chinese Culture University

Work Experience

National University of Singapore 2024-2025

Postdoctoral researcher fellow

Euro-Mediterranean Center on Climate Change 2024-Current

Scientific affiliation, Postdoctoral researcher fellow

Honors and Award

2021, Outstanding Student Presentation Award, AGU

2021, The Best Article Award (First Place), ROC (Taiwan) Meteorological Society

2018, Certificate of Excellence, Chinese Cultural University

Professional Skills

NCL, Matlab, Python, Fortran, CDO, NCO

WRF, MPAS, CESM, Linear Baroclinic Model (LBM)

Publications

1. **Xiao, H.M.**, Lo, M.H. & Yu, J.Y. The increased frequency of combined El Niño and positive IOD events since 1965s and its impacts on maritime continent hydroclimates. *Sci Rep* 12, 7532 (2022). <https://doi.org/10.1038/s41598-022-11663-1>

2. **Xiao, H.-M.**, Hsu, H.-H., Lee, T.-H., Jong, B.-T., Yu, J.-Y., Liang, Y.-C., & Lo, M.-H. (2024). The remote response in the Northern Pacific climate during winter to deforestation in the Maritime Continent. *Journal of Geophysical Research: Atmospheres*, 129, e2023JD040372. <https://doi.org/10.1029/2023JD040372>

3. Lee, T.-H., Yu, J.-Y., Lin, Y.-F., Lo, M.-H., & **Xiao, H.-M.** (2023). The potential influence of maritime continent deforestation on El Niño-Southern Oscillation: Insights from idealized modeling experiments. *Geophysical Research Letters*, 50, e2023GL105012. <https://doi.org/10.1029/2023GL105012>

4. Lin, Y.-F., Yu, J.-Y., Terng, C.-T., Wu, C.-R., Han, Y.-S., Lo, M.-H., Liao, J.-M., Lee, T.-H., **Xiao, H.-M.** (2025). Evolving El Niño patterns and their potential to transform California market squid (*Doryteuthis opalescens*) fishing environment. *Journal of Geophysical Research: Oceans*, 130, e2024JC021951. <https://doi.org/10.1029/2024JC021951>

* The teleconnection induced by deforestation in the Maritime Continent is enhanced during La Niña year (first author, under review, submitted to the *Journal of Climate*)

* Elevation-Dependent Surface Energy and Temperature Responses to Ice Cover Loss in Patagonia (first author, ready to submit)

Service

Reviewer, 2025 – present

npj Climate and Atmospheric Science (2), Journal of Geophysical Research: Atmospheres (1)

Select Conference Presentations

Sun, ZH, Bai H and **Xiao, HM** Elevation Controls on Energy and Temperature Responses to Snow/Ice Loss in Patagonia. AGU 2025 Fall Meeting, New Orleans. Poster (upcoming).

Lo, MH and **Xiao, HM** Enhanced Teleconnections of Maritime Continent Deforestation on North Pacific Climate During La Niña Condition. Asia Oceania Geosciences Society (AOGS) 2025, Singapore. Oral.

Xiao, HM and Lo, MH The remote response in the Northern Pacific climate during winter to deforestation in the Maritime Continent. AGU 2023 Fall Meeting, San Francisco. Poster.

Xiao, HM and Lo, MH The effects of deforestation on coincident El Niño and pIOD events (Part II). Asia Oceania Geosciences Society (AOGS) 2022, in virtual. Oral.

Xiao, HM and Lo, MH The effects of deforestation on coincident El Niño and pIOD events (Part II). Ocean Sciences Meeting 2022, in virtual. Poster.

Xiao, HM and Lo, MH The effects of deforestation on coincident El Niño and pIOD events (Part I). AGU 2021 Fall Meeting, in virtual. Poster.

Xiao, HM and Lo, MH Combining Effects of IOD, ENSO and Deforestation on the Maritime Continent Rainfall During northern autumn. AGU 2019 Fall Meeting, San Francisco. Poster.