Yuan-Jen Lin

Postdoctoral Associate
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EDUCATION

National Taiwan University	Taipei, Taiwan
Ph.D. in Atmospheric Sciences	2016 – 2022

Thesis: "Climate feedback and the ocean: uncertainties and their interaction under global warming"
Advisor: Yen-Ting Hwang

National Taiwan University	Taipei, Taiwan
B.S. in Atmospheric Sciences	2012 – 2016

RESEARCH EXPERIENCE AND EMPLOYMENT

Postdoctoral Associate	2024–present

Department of Atmospheric and Oceanic Sciences, University of Colorado Boulder

Postdoctoral Research Scientist	2022–2024

Center for Climate Systems Research, Columbia University
NASA Goddard Institute for Space Studies (GISS)

Visiting Scholar	2021–2022

Atmospheric & Environmental Sciences, SUNY Albany (Host: Brian E. J. Rose)

Research Assistant	2016–2021

Atmospheric Sciences, National Taiwan University (Supervisor: Yen-Ting Hwang)

PEER-REVIEWED PUBLICATIONS

in review **Lin, Yuan-Jen**, Aneesh C Subramanian, Kristopher B Karnauskas, Charlotte A DeMott, Janet Sprintall, and Rui Sun. "Salinity-Driven Barrier Layer Dynamics in the Equatorial Pacific" Under review for Journal of Climate. [Poster]

in review Tam, Rachel Yuen Sum, Timothy A. Myers, Mark D. Zelinka, Cristian Proistosescu, **Yuan-Jen Lin**, and Kate Marvel. "Meteorological Drivers of the Low-Cloud Radiative Feedback Pattern Effect and its Uncertainty." Under review for Atmospheric Chemistry and Physics. [Preprint]

2025 **Lin, Yuan-Jen**, Grégory V. Cesana, Cristian Proistosescu, Mark D. Zelinka, and Kyle C. Armour. "The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback." Journal of Climate 38, no. 2 (2025): 513-529. https://doi.org/10.1175/JCLI-D-24-0014.1 [Talk]

2023 **Lin, Yuan-Jen**, Brian EJ Rose, and Yen-Ting Hwang. "Mean state AMOC affects AMOC weakening through subsurface warming in the Labrador Sea." Journal of Climate 36, no. 12 (2023): 3895-3915. https://doi.org/10.1175/JCLI-D-22-0464.1 [Code]

2021 **Lin, Yuan-Jen**, Yen-Ting Hwang, Jian Lu, Fukai Liu, and Brian EJ Rose. "The dominant contribution of Southern Ocean heat uptake to time-evolving radiative feedback in CESM." Geophysical Research Letters 48, no. 9 (2021): e2021GL093302. https://doi.org/10.1029/2021GL093302 [Talk] [Data]

2019 **Lin, Yuan-Jen**, Yen-Ting Hwang, Paulo Ceppi, and Jonathan M. Gregory. "Uncertainty in the evolution of climate feedback traced to the strength of the Atlantic meridional overturning circulation." Geophysical Research Letters 46, no. 21 (2019): 12331-12339. https://doi.org/10.1029/2019GL083084

in prep. **Lin, Yuan-Jen**, Aneesh C Subramanian, and Kristopher B Karnauskas. "Understanding shifts in Warm Pool Eastern Edge between observations and the SKRIPS regional coupled model."

in prep. **Lin, Yuan-Jen**, Grégory V. Cesana, Cristian Proistosescu, Yue Dong, and Kate Marvel. "Intermodel spread of radiative feedback patterns traced to regional surface warming using NASA GISS ModelE3 Green's Function." [Poster]

in prep. Cesana, Grégory V., **Yuan-Jen Lin**, Ann Fridlind, Andrew Ackerman, and Greg Elsaesser. "Greater Supercooled Cloud Proportion, Less Warming: A Challenge to the Cloud Phase Feedback Consensus."

in prep. Bloch-Johnson, Jonah, Marc Alessi, Jason Cole, Yue Dong, Margaret Duffy, Jonathan Gregory, **Yuan-Jen Lin**, Tomoo Ogura, Pappu Paul, Cristi Proistosescu, Maria Rugenstein, Masahiro Watanabe, Andrew Williams, Bosong Zhang, Ming Zhao, and Chen Zhou. "Green's Function Model Intercomparison Project (GFMIP) Results: A First Look."

PRESENTATIONS

Seminar, Department of Atmospheric Science, Colorado State University   Jan 2024
"The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback"

NCAR Climate and Global Dynamics Laboratory (CGD) Seminar   Jan 2024
"The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback" [▶ Video]

Atmospheric & Climate Dynamics Seminar, University of Washington   Nov 2023
"The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback"

SEAS Colloquium in Climate Science (SCiCS), Columbia University   Apr 2022
"Understanding changing ocean circulation and its role in modifying climate sensitivity"

Lightning Talk at the 15th ECS symposium   Feb 2022
"The dominant contribution of Southern Ocean heat uptake to time-evolving radiative feedback in CESM" [▶ Video]

Climate Seminar, University at Albany (SUNY)   Oct 2021
"The role of ocean in the time-evolving radiative feedbacks"

CASPO Seminar, Scripps Institution of Oceanography   Nov 2020
"Understanding the role of ocean in modifying time-evolving radiative feedback"

HONORS AND AWARDS

2022 Chou Chia Publication Award: Lin et al. (2021) (doi: 10.1029/2021GL093302)

2021 Chou Chia Publication Award: Lin et al. (2019) (doi: 10.1029/2019GL083084)

*Chou Chia Publication Award is an annual award for climate related publication in Taiwan, in memory of the climate scientist Chou Chia.

2019 Best Presentation Award | Atmospheric Sciences Annual Meeting, Taoyuan, Taiwan.

2017 Best Presentation Award | Atmospheric Sciences Annual Meeting, Miaoli, Taiwan.

Grant funding

Teaching and mentoring experience

Teaching Assistant — National Taiwan University

Course: Climate Science

- Spring 2021, Spring 2020, Fall 2018, Fall 2016
- Prepared project materials; graded exams, homework, and project presentation; held office hours to support student projects.

Course: An Introductory Survey to Atmospheric Science Research

- Spring 2018, Spring 2017
- Graded homework and reports on assigned research topics.

Guest Lecturer — University of Colorado Boulder

Course: Climate Modeling

- Oct 21, 2025 (Fall 2025)
- Delivered a lecture on "Climate Radiative Feedback and Climate Sensitivity"

Selected conference presentations

AGU Annual Meeting, New Orleans, LA.   Dec 2025
(poster) Salinity-Driven Barrier Layer Dynamics in the Equatorial Pacific

AGU Annual Meeting, Washington, D.C.   Dec 2024
(poster) Air-sea transition zone processes driving mean state and climate variability model biases in tropical Pacific
(poster) The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback

CFMIP/CLIVAR Meeting on Clouds, Circulation and Climate, Chestnut Hill, MA.   Jun 2024
(poster) Intermodel spread of radiative feedback patterns traced to regional surface warming using NASA GISS ModelE3 Green's Function

Workshop on Confronting Earth System Model Trends with Observations, Boulder, CO.   Mar 2024
(oral) The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback

CFMIP-GASS Meeting on Cloud, Precipitation, Circulation & Climate Sensitivity, France.   Jul 2023
(poster) The relative importance of forced and unforced temperature patterns in driving the time variation of low-cloud feedback

AGU Fall Meeting, Chicago, IL.   Dec 2022
(oral) Mean state AMOC affects AMOC weakening through subsurface warming in the Labrador Sea

The Pattern Effect Workshop, Boulder, CO.   May 2022
(poster) The role of ocean in modifying SST pattern formation and time-evolving radiative feedback

US AMOC Science Team Meeting, Woods Hole, MA.   Apr 2022
(poster) Mean state AMOC affects AMOC weakening through subsurface warming in the Labrador Sea

CFMIP Annual Meeting on Clouds, Precipitation, Circulation & Climate Sensitivity, Online. Sep 2021
(poster) The role of ocean in the time-evolving radiative feedbacks

AGU Fall Meeting, Online.   Dec 2020
(oral) Attributing Radiative Feedback Evolution to Regional Ocean Heat Uptake

East Asian Workshop on Climate Dynamics, Busan, Korea.   May 2019
(oral) Uncertainty in the Evolution of Climate Feedback Traced to the Strength of the Atlantic Meridional Overturning Circulation

Kyoto University — National Taiwan University Workshop, Taipei, Taiwan.   Dec 2018
(poster) Uncertainty in the Evolution of Climate Feedback Traced to the Strength of the Atlantic Meridional Overturning Circulation

CFMIP Annual Meeting on Clouds, Precipitation, Circulation, & Climate Sensitivity, CO.   Oct 2018
(oral) Uncertainty in the Evolution of Climate Feedback Traced to the Strength of the Atlantic Meridional Overturning Circulation

Tokyo University — National Taiwan University Workshop, Taipei, Taiwan.   Aug 2017
(oral, poster) Model spread in climate feedbacks traced to evolving pattern of surface warming under Abrupt4xCO2 in CMIP5 GCMs

Atmospheric Sciences Annual Meeting, Miaoli, Taiwan.   Feb 2017
(poster) Responses to Greenhouse Gas Forcing and their Influence on Global and Regional Climate Change in CMIP5 GCMs

LEADERSHIP AND SERVICE

Peer Review
- Geophysical Research Letters
- Journal of Climate
- Journal of Advances in Modeling Earth Systems
- Nature Geoscience
- Nature Communications
- Communications Earth & Environment
- Nature Climate Change
- Weather and Climate Dynamics

Executive Committee Member of Climate Seminar, University at Albany, SUNY (2021-2022)

Volunteer Staff, CFMIP Annual Meeting (2021)

SKILL MATRIX

Programming Languages: Python (proficient), Fortran, Matlab

Shell Scripting: Bash

Version Control: Git

GCMs: Community Earth System Model (CESM), NASA GISS ModelE, SKRIPS (MITgcm–WRF)

High Performance Computing: Intel Compiler, PBS, Slurm Workload Manager

Data Analysis/Visualization: Python (xarray, dask, numpy, scipy, matplotlib, etc.), Cloud computing (Pangeo), Climate Data Operators (CDO), NetCDF Operators (NCO), NCAR Command Language (NCL), Matlab