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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

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

submitted **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: An Observational and CMIP6 Analysis." [Poster]

submitted 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."

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. and co-authors, including **Yuan-Jen Lin**. "Greater Supercooled Cloud Proportion, Less Warming: A Challenge to the Cloud Phase Feedback Consensus."

in prep. Bloch-Johnson, Jonah and co-authors, including **Yuan-Jen Lin**. "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"

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"

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

Graduate Student Study Abroad Program, Ministry of Science and Technology, Taiwan — 2021-2022
The grant supports my one-year research visit at SUNY Albany.

Selected conference presentations

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

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

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)

Teaching and mentoring experience

Teaching Assistant, National Taiwan University
Climate Science (Spring 2021, Spring 2020, Fall 2018, Fall 2016)
An Introductory Survey to Atmospheric Science Research (Spring 2018, Spring 2017)

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