Kai-Chih Tseng (Kai)

Address	201 Forrestal Rd, Princeton, NJ 08540	**Phone**	+1 (719) 201 3204
Email	Kai-chi.Tseng@noaa.gov kaichiht@princeton.edu	**website**	https://kuiper2000.github.io/

Appointment

2022 (expected) Assistant Professor- Atmospheric Science, National Taiwan University

Education and Professional Training

2019 – 2022 Postdoc Atmospheric and Oceanic Science, Princeton University and NOAA Geophysical Fluid Dynamics Laboratory

2016 – 2019 Ph.D. Atmospheric Science - Colorado State University
(Highest honors and degree awarded within 3yrs)

2008 – 2014 BS/MS Atmospheric Science - National Taiwan University
(Highest honors in both B.S. and M.S.)

Publications

1. **Tseng K.-C**., and co-authors 2021: The multiseasonal forecast of CONUS tornado activity and the optimal environment for severe weather (in preparation, to be submitted)
2. Bushuk, M., and **co-authors** 2021: Mechanisms of Regional Artic Sea Ice Predictability in Dynamical Seasonal Forecast Systems (submitted to J. Clim.)
3. Zhang, L., and **co-authors** 2021: Using large ensembles to elucidate the possible roles of Southern Ocean meridional overturning circulation in the Southern Ocean 36-yr SST trend (submitted to JClim.)
4. Jia, L., and **co-authors** 2021: Skillful seasonal prediction of North American summertime hot extremes (submitted to JClim)
5. **Tseng K.-C**., and co-authors 2021: When will humanity notice its influence on atmospheric rivers? (submitted)
6. Chen Y.-L.,and **co-authors** 2021: Effect of the MJO on East Asian winter rainfall as revealed by a SVD analysis (in press)
7. Bushuk, M., and **co-authors** 2021: Seasonal prediction and predictability of regional Antarctic sea ice *J. Climate*, 1–68
8. Zhang, G., and **co-authors** 2021: Seasonal Predictability of Baroclinic Waves *npj Clim Atmos Sci* **4(50)**
9. **Tseng K.-C**., and co-authors 2021: Are multiseasonal forecasts of atmospheric rivers possible? **48**, e2021GL094000. https://doi.org/10.1029/2021GL094000
10. **Tseng K.-C**., N. C. Johnson., E. D. Maloney, E. A. Barnes, and S. B. Kapnick 2021: Mapping Large-scale Climate Variability to Hydrological Extremes: An Application of the Linear Inverse Model to Subseasonal prediction *J. Climate*, **34(11)**, 4207–4225

11. **Tseng K.-C**., E. A. Barnes, and E. D. Maloney 2021: The important role of the MJO for extratropical variability in observations and the CMIP5 climate models (submitted to JGR-Atmosphere)

2020

12. **Tseng K.-C**., E. D. Maloney and E. A. Barnes, 2020: The consistency of MJO teleconnection patterns on interannual timescales *J. Climate*, **33**, 3471-3486

13. **Tseng K.-C**., E. A. Barnes, and E. D. Maloney, 2020: The importance of past MJO activity in determining the future state of midlatitude circulation *J. Climate* **33**, 2131-2147

14. **Tseng K.-C**., E. D. Maloney, and E. A. Barnes, 2019: Explaining the consistency of MJO teleconnection patterns with linear Rossby wave theory, *J. Climate*, **32**, 531–548.

15. **Tseng K.-C**., E. A. Barnes, and E. D. Maloney, 2018: Prediction of the midlatitude response to strong Madden-Julian oscillation events on S2S timescales, *Geophys. Res. Lett.*, **45**, 463–470. (NOAA Climate Program Office research highlight)

16. **Tseng K.-C**., C.-H. Sui., and T. Li, 2015: Moistening Processes of MJO events during DYNAMO/CINDY, *J. Climate*, **28**, 3041–3057.

Honors and Awards

2021	YuShan Scholar - Faculty Early Career Development	Ministry of Education, Taiwan
2019	Alumni Award (Ph.D. highest honor)	Colorado State University
2018	Shrake-Culler Scholarship (outstanding academic record)	Colorado State University
2016	Program of Research and Scholarly Excellence	Colorado State University
2014	Deans Award (M.S. highest honor)	National Taiwan University
2011 – 2015	International Research Fellowship	National Taiwan University
2012	Deans Award (B.S. highest honor)	National Taiwan University
2012	NICAM workshop Traveling Grant	University of Tokyo
2008 – 2011	Presidential Award (top 5% of the class in the academic year)	National Taiwan University
2009 – 2010	Hsu Shui-Sen Fellowship	Changhua County, Taiwan

Conference Presentations

1. **Tseng K.-C**., and co-authors, 2021 : Are multiseasonal forecasts of atmospheric rivers possible? WWRP/WCRP workshop [poster]

2. **Tseng K.-C**., N. C. Johnson., E. D. Maloney, E. A. Barnes, and S. B. Kapnick, 2021: Mapping Large-scale Climate Variability to Hydrological Extremes: An Application of the Linear Inverse Model to Subseasonal predictio, WWRP/WCRP/S2S/MJO teleconnection webinar [invited talk]

3. **Tseng K.-C**., and co-authors, 2020 : Seasonal Skillful Prediction of Western North America Atmospheric Rivers, AGU [poster]

4. **Tseng K.-C**., E. A. Barnes and E. D. Maloney, 2019 : The importance of past MJO activity in determining the future state of extratropical circulations, AGU [poster]

5. **Tseng K.-C**., E. A. Barnes and E. D. Maloney, 2018 : Explaining the consistency of MJO teleconnection patterns with linear Rossby wave theory, Second International Conference on Subseasonal to Seasonal Prediction (S2S) and Second International Conference on Seasonal to Decadal Prediction (S2D) [poster]

6. **Tseng K.-C**., E. A. Barnes and E. D. Maloney, 2017 : Prediction of North Pacific Height Anomalies During Strong Madden-Julian Oscillation Events, AGU Fall Meeting [oral]

7. **Tseng K.-C**., E. A. Barnes and E. D. Maloney, 2017 : Forecasting North Pacific Height Anomalies with the MJO on S2S timescales , 30th Conference on Climate Variability and Change/24th Conference on Probability and Statistics in the Atmospheric Sciences/16th Conference on Artificial Intelligence and its Applications to the Environmental Sciences [oral]

8. **Tseng K.-C**., and C.-H. Sui, 2016 : Moistening Process in Observed and Simulated MJOs during DYNAMO/CINDY-(cumulus properties diagnosis), 32nd Conference on Hurricanes and Tropical Meteorology [oral]

9. **Tseng K.-C**., and C.-H. Sui, 2014A Diagnosis of Boundary Layer Moistening Processes for Madden-Julian Oscillations During DYNAMO IOP, 31st Conference on Hurricanes and Tropical Meteorology, AMS, 6B.C [oral]

Reviewer Experience-Journal

1. Journal of Climate
2. npj, Climate and Atmospheric Science (Nature)
3. Geophysical Research Letter
4. JGR-Atmosphere
5. Climate Dynamics
6. Advances in Atmospheric Sciences
7. Monthly Weatehr Review
8. GFDL internal review

Reviewer Experience-Proposal

1. National Science Fundation