

# Kai-Chih Tseng (Kai)

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## Education and Professional Training

- 2019 Aug –** Postdoctoral Fellow- Princeton University/NOAA GFDL  
Advisor: Dr. Nat Johnson
- 2016 Aug – 2019 Jun** Ph.D. in Atmospheric Science - Colorado State University  
Advisors: Dr. Elizabeth Barnes, Dr. Eric Maloney  
Graduated with Honors  
  
(2014 Sep – 2015 Oct : in Military Service)
- 2008 Aug – 2014 Jun** B.S. and M.S. in Atmospheric Science -National Taiwan University  
Advisor: Dr. Chung-Hsiung Sui  
GPA – B.S. 3.96/4.00 + M.S. 4.00/4.00  
Graduated with Honors (top 5% in both BS and MS)

## Publications

1. Zhang, L., and **co-authors**: Using large ensembles to elucidate the possible roles of Southern Ocean meridional overturning circulation in the Southern Ocean 36-yr SST trend (to be submitted)
2. Jia, L., and **co-authors**: Skillful seasonal prediction of North American summertime hot extremes (submitted)
3. **Tseng K.-C.**, and co-authors: The response of atmospheric river to a warmer climate and time of signal emergence (to be submitted to Geophys. Res. Lett)
4. Bushuk, M., and **co-authors**: Seasonal prediction and predictability of regional Antarctic sea ice (minor revision and pending publication, JCLim)
5. Zhang, G., and **co-authors**: Seasonal Predictability of Baroclinic Waves Establishes Pathway Toward Predicting Extratropical Extremes (submitted to PNAS)
6. **Tseng K.-C.**, and co-authors: Seasonal Prediction of western North America Atmospheric Rivers (submitted to npj-Climate and Atmospheric Science, Nature)
7. **Tseng K.-C.**, N. C. Johnson., E. D. Maloney, E. A. Barnes, and S. B. Kapnick: Mapping Large-scale Climate Variability to Hydrological Extremes: An Application of the Linear Inverse Model to Subseasonal prediction (JCLim, in press)
8. **Tseng K.-C.**, E. A. Barnes, and E. D. Maloney: The important role of the MJO for extratropical variability in observations and the CMIP5 climate models (submitted to JGR-Atmosphere)
9. **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
10. **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

11. **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.
12. **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)
13. **Tseng K.-C.**, C.-H. Sui., and T. Li, 2015: Moistening Processes of MJO events during DY-NAMO/CINDY, *J. Climate*, **28**, 3041–3057.

## Honors and Awards

<b>2019</b>	Alumni Award (the best Ph.D. paper of the year)	Colorado State University
<b>2018</b>	Shrake-Culler Scholarship (outstanding academic record)	Colorado State University
<b>2016</b>	Program of Research and Scholarly Excellence	Colorado State University
<b>2014</b>	Deans Award, (the best M.S. thesis of the year)	National Taiwan University
<b>2011 – 2015</b>	International Research Fellowship	National Taiwan University
<b>2012</b>	Deans Award, top 5% of undergraduate students	National Taiwan University
<b>2012</b>	NICAM workshop Traveling Grant (the only undergrad recipient)	University of Tokyo
<b>2008 – 2011</b>	Presidential Award (top 5% of the class in the academic year)	National Taiwan University
<b>2009 – 2010</b>	Hsu Shui-Sen Fellowship	Changhua County, Taiwan

## Conference Presentations

1. **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]
2. **Tseng K.-C.**, and co-authors, 2020 : Seasonal Skillful Prediction of Western North America Atmospheric Rivers, AGU [poster]
3. **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]
4. **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]
5. **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]
6. **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]
7. **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]
8. **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

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 Weather Review
8. GFDL internal review