

## **Xian Wu**

ASP Postdoctoral Fellow

Climate and Global Dynamics Division

National Center for Atmospheric Research

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### **Education**

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Ph.D. Climate Dynamics

The University of Texas at Austin

2015 – 2020

Dissertation: “*Duration of El Niño and La Niña Events: Mechanisms and Multi-year Predictability*”. Advisor: Yuko Okumura

B.S. Atmospheric Sciences (Climatology Direction)

Nanjing University of Information Science and Technology

2011 – 2015

Thesis: “*Interannual variations of winter precipitation over southern China and its linkage to El Niño-Southern Oscillation*”

### **Research Interests**

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Large-scale ocean-atmosphere interaction

Climate variability and change

Climate modeling and predictability

### **Appointments**

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Advanced Study Program Postdoctoral Fellow, National Center for Atmospheric Research, Sept 2020–present

### **Fellowships and Awards**

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NCAR Advanced Study Program Postdoctoral Fellowship	2020
UT Austin, Institute for Geophysics Graduate Fellowship	Spring 2020
Outstanding Student Presentation Award, American Geophysical Union Fall Meeting	2019
UT Austin, Institute for Geophysics Entry Fellowship	2015 – 2016
Excellent Honor Graduate Award, NUIST	2015
Third Prize of China Undergraduate Mathematical Contest in Modeling	2013
First-Class Scholarship, NUIST	2011 – 2015

## Publications

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Published:

4. **Wu, X.**, Y. M. Okumura, C. Deser and P. N. DiNezio, 2021: Two-year Dynamical Predictions of ENSO Event Duration during 1954–2015. *J. Climate*. 34, 4069–4087, <https://doi.org/10.1175/jcli-d-20-0619.1>.
3. **Wu, X.**, Y. M. Okumura, and P. N. DiNezio, 2021: Predictability of El Niño Duration Based on the Onset Timing. *J. Climate*. 34, 1351–1366, <https://doi.org/10.1175/JCLI-D-19-0963.1>.
2. **Wu, X.**, Y. M. Okumura, and P. N. DiNezio, 2019: What Controls the Duration of El Niño and La Niña Events? *J. Climate*, 32, 5941–5965, <https://doi.org/10.1175/JCLI-D-18-0681.1>.
1. Okumura, Y. M., T. Sun, and **X. Wu**, 2017: Asymmetric Modulation of El Niño and La Niña and the Linkage to Tropical Pacific Decadal Variability. *J. Climate*, 30, 4705–4733, <https://doi.org/10.1175/JCLI-D-16-0680.1>.

Under review:

- Wu, X.** Y. M. Okumura, P. N. DiNezio, S. G. Yeager, and C. Deser, 2021: The Equatorial Pacific Cold Tongue Bias in CESM1 and its Influence on ENSO Forecasts. *J. Climate*, under review.

## Selected Presentations

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- Wu, X.**, Y. M. Okumura, S. G. Yeager, C. Deser, and P. N. DiNezio. The Equatorial Pacific Cold Tongue Bias in CESM1 and its Influence on ENSO Forecasts. CESM Working Group Meeting 2021, virtual, Feb 2021 (Talk).
- Wu, X.**, Y. M. Okumura, C. Deser and P. N. DiNezio. Predicting the Duration of El Niño and La Niña Events during 1954-2015. American Geophysical Union Fall Meeting, virtual, Dec 2020 (Talk).
- Wu, X.**, Y. M. Okumura, P. N. DiNezio, and C. Deser. Duration of El Niño and La Niña Events: Dynamics and Multiyear Predictability. American Geophysical Union Fall Meeting, virtual, Dec 2020 (Invited Poster).
- Wu, X.**, Y. M. Okumura, C. Deser and P. N. DiNezio. Two-year Predictions of ENSO event duration during 1954-2015. CESM Workshop 2020, virtual, Jun 2020 (Talk).
- Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Duration of El Niño and La Niña event: mechanisms and multi-year predictability, Water, Climate, and Environmental Seminar Series, Austin, TX, Mar 2020 (Talk).
- Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Two-year Predictions of ENSO event duration during

1954-2015. American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2019 (Poster).

**Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Predictability of El Niño duration based on the onset timing. American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2019 (Talk).

**Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Predictability of El Niño duration based on the onset timing. UT Austin Institute for Geophysics Seminar Series, Austin, TX, Dec 2019 (Talk).

**Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Predictability of El Niño duration in a coupled general circulation model. American Meteorological Society 99th Annual Meeting, Phoenix, AZ. Jan 2019 (Talk), [Link to Recorded Presentation](#).

**Wu, X.**, Y. M. Okumura, and P. N. DiNezio. What controls the duration of El Niño and La Niña events? American Meteorological Society 98th Annual Meeting, Austin, TX. Jan 2018 (Talk), [Link to Recorded Presentation](#).

Lawman, A. E., T. Sun, T. M. Shanahan, P. N. DiNezio, K. Gomez; N. Piatrunia, C. Sun, **X. Wu**, M. Kageyama, U. Merkel, B. L. Otto-Bliesner, A. Abe-Ouchi, G. Lohmann, J. S. Singarayer. Tropical Hydroclimate Change during Heinrich Stadial 1: An Integrative Proxy-Model Synthesis. American Geophysical Union Fall Meeting, New Orleans, CA, Dec 2017 (Poster)

**Wu, X.**, Y. M. Okumura, and P. N. DiNezio. Impact of Interbasin Teleconnections on the on the Duration of El Niño and La Niña. American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2016 (Poster)

## Teaching Experience

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Graduate Teaching Assistant, *GEO 302 Earth, Wind, and Fire* Spring 2018

## Summer Schools

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Artificial Intelligence for Earth System Science Summer School, Boulder, CO Jun 2020

Advanced Climate Dynamics Courses Summer School (Dynamics of the Seasonal Cycle), Rondvassbu, Norway Sept 2017

Community Earth System Model Tutorial, NCAR, Boulder, CO Aug 2016

## Community Service

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Reviews for *Advances in Climate Change Research*, *Climate Dynamics*, *Geophysical Research Letters*, *International Journal of Climatology*, *Journal of Climate*, *Journal of Geophysical Research: Atmospheres*, *Journal of Physical Oceanography*, *Nature Geoscience*, *Science Bulletin*

## **Outreach**

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Event Supervisor, UT Austin Science Olympiad Tournaments (Meteorology Test) 2018–2019  
K-12 STEM Outreach, Ford Elementary, Georgetown, Texas Jan 2019  
Co-organize outreach activities on the 2014 World Meteorological Day, inform the public on air  
pollution facts and actions to reduce air pollution, Nanjing, China Mar 2014

## **Computer Skills and Numerical Modeling**

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*Programming Languages* FORTRAN, NCAR Command Language, Python, Shell Script  
*Numerical Modeling* Community Earth System Modeling  
*System* Windows, Mac OS, Unix/Linux

## **Professional Memberships**

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American Meteorological Society  
American Geophysical Union