YAN JIANG

School of Global Policy & Strategy
University of California, San Diego
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yjiangc.github.io Publications

Research Interests

▪land-climate-human interactions ▪climate dynamics
▪water cycle ▪tropical rainforest ▪wildfire ▪food security
▪ causal inference ▪remote sensing ▪machine learning

EDUCATION

Ph.D. in Atmospheric Science **03/2022**
University at Albany, State University of New York (SUNY), Albany, NY
Advisor: Dr. Liming Zhou
Dissertation: *Understanding Changes in Precipitation, Wildfires, and Possible Governing Factors over Central Africa*
Committee: Drs. Liming Zhou, Aiguo Dai, Brian E. J. Rose, Robert Fovell

B.S. in Atmospheric Science (GPA: 4.0/4.0, or 4.3/5.0) **06/2016**
Sun Yat-Sen University (Zhongshan University), Guangzhou, China
Advisor: Dr. Song Yang
Thesis: *Changes in Haze over Guangdong Province and Possible Drivers*

ACADEMIC APPOINTMENTS

Postdoctoral Scholar **03/2022-present**
School of Global Policy & Strategy, University of California, San Diego
Advisor: Dr. Jennifer Burney

Graduate Research Assistant **08/2016-01/2022**
Department of Atmospheric & Environmental Sciences, University at Albany, SUNY
Advisor: Dr. Liming Zhou

Undergraduate Laboratory Assistant **09/2014-06/2016**
Atmospheric Observation & Data Acquisition Laboratory, Sun Yet-Sen University
Advisor: Dr. Guangdong Lan

PUBLICATIONS

Work in progress

[3] **Jiang, Y.** and Burney, J., Tracing Water Sources for Global Fool Production
[2] **Jiang, Y.,** Zhou, L., … Impacts of Evapotranspiration on Precipitation in the Congo Basin
[1] **Jiang, Y.,** Zhou, L., … Changes in Rainfall Characteristics over Tropical Rainforests

Peer-reviewed (*corresponding author)

[9] **Jiang, Y.*,** Zhou, L., Roundy, P. E., Hua, W. & Raghavendra, A. (2021) Increasing influence of Indian Ocean Dipole on precipitation over Central Equatorial Africa. ***Geophysical Research Letters***, doi: 10.1029/2020GL092370
[8] **Jiang, Y.*,** Zhou, L. & Raghavendra, A. (2020) Observed changes in fire patterns and possible drivers over Central Africa, ***Environmental Research Letter***, 5, 9. doi: 10.1088/1748-9326/ab9db2
[7] **Jiang, Y.,** Zhou, L.*, Tucker, C. J., Raghavendra, A., Hua, W., Liu, Y. Y., & Joiner, J. (2019). Widespread increase of boreal summer dry season length over the Congo rainforest. ***Nature Climate Change***, 9(8), 617-622, doi: 10.1038/s41558-019-0512-y

[6] Raghavendra, A.*, Xia, G., Zhou, L. and **Jiang, Y.** (2022) Orographic enhancement of rainfall over the Congo Basin. ***Atmospheric Science Letters***, e1079. doi: 10.1002/asl.1079

[5] Alber, K.*, Raghavendra, A., Zhou, L., **Jiang, Y.,** Sussman, H. S. & Solimine, S. L. (2020) Analyzing intensifying thunderstorms over the Congo Basin using the Gálvez-Davison index from 1983-2018. ***Climate Dynamics***, 56, 949-967. doi: 10.1007/s00382-020-05513-x

[4] Raghavendra, A.*, Zhou, L., Roundy, P. E., **Jiang, Y.,** Milrad, S. M., Hua, W. & Xia, G. (2020) The MJO's impact on rainfall trends over the Congo rainforest. ***Climate Dynamics***,1-13. doi: 10.1007/s00382-020- 05133-5

[3] Raghavendra, A.*, Zhou, L., **Jiang, Y.,** & Hua, W. (2018). Increasing extent and intensity of thunderstorms observed over the Congo Basin from 1982 to 2016. ***Atmospheric Research***, 213, 17-26, doi: 10.1016/j.atmosres.2018.05.028

[2] Hua, W.*, Zhou, L., Chen, H., Nicholson, S. E., **Jiang, Y.,** & Raghavendra, A. (2018). Understanding the Central Equatorial African long-term drought using AMP-type simulations. ***Climate Dynamics***, 50(3-4), 1115-1128, doi: 10.1007/s00382-017-3665-2

[1] Hua, W.*, Zhou, L., Chen, H., Nicholson, S. E., Raghavendra, A., & **Jiang, Y.** (2016). Possible causes of the Central Equatorial African long-term drought. ***Environmental Research Letters***, 11(12), 124002, doi: 10.1088/1748-9326/11/12/124002

Other publications

[2] Stutsrim, B., **Jiang, Y.,** Raghavendra. A., & Jones., B. (2019). Session 2: Weather Enterprise Keynote. Conference Report: 2019 AMS Summer Community Meeting, A. Raghavendra and L. C. Gaudet, Eds., ***Amer. Meteor. Soc.***, 9-11.

[1] Henny, L., Fandrich, K. M., **Jiang, Y.,** & Miller, S. (2019). Session 7: Authoritative Climate Science for Applications. Conference Report: 2019 AMS Summer Community Meeting, A. Raghavendra and L. C. Gaudet, Eds., ***Amer. Meteor. Soc.***, 41-45.

TALKS & CONFERENCE PRESENTATIONS

(Only including presentations as the presenting author)

- **Jiang, Y.** and Burney, J. 2022: Where Does Water Come from for Food Production: A Global Analysis. *Session: Linkages Across Climate, Hydrologic, and Agricultural System/AGU 2022 Fall Meeting, Chicago, IL* (**Oral**)
- **Jiang, Y.,** Zhou, L., Raghavendra, A., Roundy, P. E., and Hua, W. 2022: Increasing Influence of Indian Ocean Dipole on Precipitation over Central Equatorial Africa.
  35th Conference on Climate Variability and Change/102nd AMS Annual Meeting, Houston, TX **(Oral-virtual)**
- **Jiang, Y.** 2021: Observed Variations in Precipitation Seasonality and Wildfires over Central Africa. *GFDL/Princeton University, Princeton, NJ* **(Invited-virtual)**
- **Jiang, Y.,** Zhou, L., Raghavendra, A. 2020: Recent Trends in Central African Fires and Possible Drivers. *100th AMS Annual Meeting, Boston, MA* **(Oral)**
- **Jiang, Y.,** Zhou, L., Raghavendra, A. 2019: Observational Trends in Burned Area and Driving Forces over Central Africa.
  Graduate Climate Conference, Woods Hole, MA **(Poster)**
- **Jiang, Y.,** Zhou, L., Raghavendra, A. and Hua, W. 2018: Widespread Increase of Boreal Summer Dry Season Length Observed over the Congo Rainforest in the Last Three Decade.
  Chapman Conference on Hydrological Research in the Congo Basin, Washington, DC **(Poster)**
- **Jiang, Y.,** Zhou, L., Raghavendra, A. and Hua, W. 2018: Observed Trends of Dry Season Length over the Congo Basin.
  WCRP Grand Challenge on Clouds, Circulation and Climate Sensitivity: 2nd Meeting on Monsoons and Tropical Rain Belts, Trieste, Italy **(Poster)**
- **Jiang, Y.,** Zhou, L., Raghavendra, A. and Hua, W. 2017: Increase in Dry Season Length over the Congo.
  31st Conference on Climate Variability and Change/98th AMS Annual Meeting, Austin, TX **(Poster)**

GRANTS, AWARDS & SCHOLARSHIPS

Travel Grant, Ohio State University **2018**
Travel Grant, Climate and Large-Scale Dynamics Program of NSF **2018**
National Scholarship, Sun Yet-Sen University **2014,2015**
(Highest award for Chinese undergraduate students)
First Price Scholarship, Sun Yet-Sen University **2013, 2014, 2015**
Zhongtao Environmental Scholarship, Sun Yat-Sen University **2013**

TEACHING EXPERIENCE

Teaching Assistant **01/2018-05/2020**
Department of Atmospheric & Environmental Sciences, University at Albany, SUNY
- Climate Laboratory, Professor: Brian Rose
- Atmospheric Physics (*graduate level*), Professor: Liming Zhou
- Remote Sensing (both graduate & undergraduate levels), Professor: Liming Zhou
- Introduction to Climate Change, Professor: Christopher D. Thorncroft

Teaching Assistant **08/2015-09/2015**
Department of Atmospheric Science, Sun Yat-Sen University
- Experiment of Atmospheric Observation, Professor: Guangdong Lan

PROFESSIONAL & COMMUNITY SERVICES

Journal Reviewer Climate Dynamics, Community Earth & Environment, Environmental Research Letters, Global Change Biology, International Journal of Climatology, Plants, Remote Sensing, Scientific Report, Sensors, AGU Books
Grant Reviewer UAlbany Graduate Student Association Research Grant **07/2019-12/2021**
Judge, AGU Outstanding Student Presentation Awards program **12/2022**
Rapporteur, 2019 AMS Summer Community Meeting, UAlbany **08/2019**
Co-Leader, DAES seminar program committee, UAlbany **09/2018-08/2019**
Mentor, Graduate student mentor program, UAlbany **09/2017-08/2019**
Volunteer, MiSci Science Festival, Schenectady, NY **10/2018**
Judge, AMS undergraduate student poster session **01/2018**
Volunteer, Annual Earth Day, UAlbany **04/2016, 04/2019**
Leader, World Meteorology Day, Sun Yat-Sen University **03/2015**
Professional Affiliations American Meteorological Society, American Geophysical Union

TECHNICAL SKILLS

Programming	Python (numpy, pandas, xarray, scipy, sklearn, gdal, pydrive), MATLAB, FORTRAN, CDO, Bash
Data	CHIRPS2, CMAP, CMIP5, ERA-Interim, ERA5, GFED, GIMMS, GLEAM, GPCC, GPCP, GNIP (Global Network of Isotopes in Precipitation), MERRA, MERRA2, MODIS, NASA TES/AIRS, NOAA GridSat, TRMM, *in situ* meteorological observations
Models	ICTP Regional Climate Model (RegCM4.9.3), NCAR Community Earth System Mode (CESM 1.2.1)
Systems & Tools	High performance computing environment (slurm), Jupyter Notebook, Google Earth Engine, Windows, Linux, MacOS, Microsoft Office Suite, HTML/CSS/HUGO
Languages	English, Mandarin (native), Japanese (JLPT N2), French (beginner)

MEDIA OUTREACH

Selected coverage from local and national media outlets on published research

- UAlbany News, "*Decreasing Wildfires Observed Over Central Africa*", 09/24/2020
- Pys.org, "*Decreasing Wildfires Observed Over Central Africa*", 09/16/2020
- Eos, "*Congo Rainforest Endures a Longer Dry Season*", 07/25/2019
- NASA Earth Observatory, "*A Longer Dry Season in the Congo Rainforest*", 07/03/2019
- UAlbany News, "*Longer Summer Dry Season Observed in Congo Rainforest*", 07/02/2019

WORKSHOP, SUMMER/EXCHANGE SCHOOL EXPERIENCES

NASA JPL Summer School on *Satellite Observational and Climate Models*, virtual **08/2020**

Unidata Python Workshop, UAlbany **05/2018**

International Centre of Theoretical Physical Summer School on *Theory, Mechanisms and Hierarchical Modeling*, Trieste, Italy **06/2018-07/2018**

Peking University Summer School on *Climate, Weather, and Pollution and Health Consequences*, Beijing, China **07/2017-08/2017**

Plymouth University, Field Course & Campaign, Plymouth, UK **03/2014-04/2014**