

# **Jose Alfredo Ocegueda Sanchez**

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## **SHORT BIO**

I am a Ph.D. student in the EAPS department at Purdue University, where I have been since 2022. I work with Prof. [Daniel Chavas](#) to quantify the role of ITCZ breakdowns in tropical cyclogenesis in the Eastern Pacific. My research interests include weather and climate extremes such as hurricanes, atmospheric rivers, monsoons, cut-off lows, and atmospheric blocking. I enjoy formulating observationally-based hypotheses and testing them by integrating theoretical frameworks with numerical modeling. I am passionate working on regions that have received relatively little scientific attention to enhance our understanding of the Earth System Model, remembering that we do science for the people.

## **EDUCATION**

**Purdue University** 2022 – Present  
Ph.D. in Atmospheric Sciences Advisor: Daniel Chavas

**Universidad de Guadalajara** 2018 – 2022  
Bachelor's degree in physics Advisor: [Noel Gutierrez Brizuela](#)  
Best of the Generation Medal award  
Thesis: Simulation of a turbidity current in a volcanic lake and analysis of mixing by internal waves

**Centro de Enseñanza Técnica Industrial** 2013 – 2017  
Technologist in Industrial Chemistry Advisor: José Antonio González Moreno  
Thesis: Development of a Less Expensive Method for Radon Measurements

## **PROFESSIONAL EXPERIENCE**

**Graduate Research Assistant** August 2022 – Present  
Purdue University  
West Lafayette, Indiana, United States of America.

**Intern:** Geophysical Fluid Dynamics Laboratory August 2021 – April 2022  
University of Guadalajara  
Guadalajara, Jalisco, Mexico.

**Chemistry lab assistant:** August 2016 – December 2017  
Centro de Enseñanza Técnica Industrial. Department of Industrial Chemistry.  
Tonala, Jalisco, Mexico.

## **PUBLICATIONS**

[1] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. "Interannual Variability of Tropical Cyclone Landfalls in the Eastern North Pacific: Environmental Drivers and Implications", *Geophysical Research Letters* (**2025**)

## TRAINING

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<b>Climate Modelling Summer School</b> National Centre for Atmospheric Science	Cambridge, United Kingdom September 7-19, 2025
<b>MMM CELCIUS</b> NSF NCAR'S MMM Laboratory	Boulder, CO., USA 28 July- 1 <sup>st</sup> August, 2025
<b>Workshop on Global Monsoons: Theory, Models, and Observations</b> International Center for Theoretical Physics	Mexico City, Mexico January 20-24, 2025
<b>Workshop on Fundamentals of Deep Learning</b> NVIDIA & Purdue University	West Lafayette, IN., USA November 8 2024
<b>MPAS Atmosphere and JEDI tutorial</b> National Center for Atmospheric Research	DC, USA 30 September – October 4 2024

## HONORS AND AWARDS

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<b>Kasahara Pathways in Science Fund</b>	2025
<b>Purdue Institute for Sustainable Future Travel Award</b>	2024
<b>AMS Student Presenter Travel Award</b>	2024
<b>CONAHCYT Fellowship</b>	2023
<b>Ross-Lynn Assistantship</b>	2022
<b>State Youth Award</b> Awarded by Jalisco Youth Institute for academic performance.	2017
<b>State award for science and technology innovation</b> Awarded by the Jalisco State Government for obtaining a new industrial design patent.	2017

## TEACHING EXPERIENCES

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<b>TA EAPS 53400: Hurricanes and Tropical Meteorology</b>	Spring 2026
Create computer-lab assignments and supporting materials; review coursework and provide grading/feedback.	
<b>Foundations of College Teaching Certificate</b>	May 2023 – Aug 2023
Purdue University series of courses on how to design, teach, and evaluate at the college level.	
<b>Volunteer in the college of sciences</b>	August 2021 – May 2022
Giving private tutoring to freshman and sophomore students with core curriculum courses.	

## COMPUTER SKILLS

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Python, MPAS-A, Julia, Speedy Weather, Bash, Git, MPAS-JEDI, R

## SERVICE & OUTREACH

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Founder and lead organizer: <b>ClimART</b> (climate x art outreach initiative)	2025
Student organizer of Purdue EAPS Storm Snacks	Fall 2023 – Present
Volunteer speaker at Purdue Expo Day	2024, 2025
Purdue Super Heroes of Sciences Outreach short videos	2024,2025
Instructor Science Clubs Edition Mexico 2025	Schedule Summer 2025
K-12 Jalisco State Outreach Program instructor	Summer 2020,2021

## CONFERENCES PROCEEDINGS

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- [7] Ocegueda Sanchez, J. A., Chavas, D. R., & Baldwin, J. W. (2025, December). "The Importance of Seed Types for Tropical Cyclone Genesis in the Eastern and Central Pacific." AGU25.
- [6] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2024, December). Why Do Genesis Potential Indices Fail to Capture the Tropical Cyclone Genesis Distribution in the Eastern North Pacific? Insights from Reanalysis. In *AGU Fall Meeting Abstracts* (Vol. 2024)
- [5] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2024, June). What Drives Variability in Tropical Cyclone Landfall Patterns in the Eastern North Pacific? Environmental Drivers and Implications. In *36th Conference on Hurricanes and Tropical Meteorology*. AMS.
- [4] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2024, May). What Drives Variability in Tropical Cyclone Landfall Patterns in the Eastern North Pacific? Environmental Drivers and Implications. In *2024 Symposium on Hurricane Risk in a Changing Climate*.
- [3] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2024, January). What Drives Variability in Tropical Cyclone Landfall Patterns in the Eastern North Pacific? Environmental Drivers and Implications. In *6th Special Symposium on Tropical Meteorology and Tropical Cyclones*. AMS annual meeting.
- [2] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2023, December). What Drives Variability in Tropical Cyclone Landfall Patterns in the Eastern North Pacific? Environmental Drivers and Implications. *AGU Fall Meeting Abstracts* (Vol. 2023)
- [1] Ocegueda Sanchez, J. A., Chavas, D. R., & Jones, J. (2023, September). What Drives Variability in Tropical Cyclone Landfall Patterns in the Eastern North Pacific? Environmental Drivers and Implications. In *2023 Midwest Student Conference on Atmospheric Research*.