

## MARIANA I. TORRES

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### EDUCATION

**B.S. in Biology, Instituto Politécnico Nacional (IPN)**

**2023**

Thesis: “Characterization of marine heatwave events in a tropical coral reef system in the Gulf of Mexico: The Veracruz Reef System” (P.I.: Dr. Jorge Zavala Hidalgo) at the **National Autonomous University of Mexico (UNAM)**

### RESEARCH INTERESTS

Climate science, biophysical interactions, physical and biological oceanography, population and ecosystem ecology, climate modeling, climate change impacts on marine ecosystems, climate adaptation, community-engaged research

### RESEARCH EXPERIENCE

9/23- present **Junior Specialist | CLIMATE Justice Research Fellow, UC Irvine**

Ocean and Climate Dynamics & CLIMATE Justice Initiative | Department of Earth System Science

Advisors: Dr. Henri F. Drake & Dr. Kathleen R. Johnson

- Research on drivers of marine heatwaves using GFDL’s CM4.0
- Experience with Python, Git version control, and HPC user
- Co-conducting study with a community organization (Crystal Cove Conservancy) on mapping of kelp forests & seagrass in Crystal Cove Marine Protected Area (MPA)

2022-2023 **Student Research Associate, Institute of Atmospheric Sciences and Climate Change, UNAM**

Ocean-Atmosphere Interaction Group (IOA). Advisors: Dr. Jorge Zavala Hidalgo, Dr. Marina Sánchez

- Conducted study on “Characterization of marine heatwave events in a tropical coral reef system in the Gulf of Mexico”
- Analyzed wind data from the Weather Research and Forecasting (WRF) Model through UNAM’s HPC
- Analyzed sea surface temperature (SST) data from a reef system in the Gulf of Mexico
- Created SST database, NetCDF files, developed code to detect and characterize marine heatwaves

Summer 2022 **Research Intern, Columbia Climate School, Columbia University**

Advisors: Dr. Joshua Fisher, Dr. Beth Fisher-Yoshida, Joan Lopez

- Contributed to a book publication: Lopez, J.C., & Fisher-Yoshida, B. (2023). Peacebuilding in Colombia: From the Lens of Community and Policy (1st ed.).  
<https://doi.org/10.4324/9781003309116>
- Conducted and presented community-based study: “Youth, Peace, and Security: Themes in narratives of peacebuilding responses”
- Developed coding framework to analyze qualitative data, conducted literature reviews, translated, transcribed, and coded interviews, wrote data analysis and synthesis reports using NVivo

2022-2023 **Assistant Zooplankton Collection Curator, Instituto Politécnico Nacional**

Marine Ecology Laboratory, Department of Zoology

Advisor: Dr. Marina Sánchez Ramírez

- Observed, identified, organized, and labeled zooplankton species
- Contributed to study on “Ichthyoplankton from coastal lagoons in the Southeastern Gulf of Mexico”
- Contributed to updating the university’s zooplankton collection database
- Trained and mentored first-year undergraduate students

### AWARDS & SCHOLARSHIPS

2023 Princeton University Prospective Ph.D. Preview Scholar, Princeton University Graduate School

2023 National Science Foundation (NSF) funded Postbaccalaureate Fellowship in Climate Change & Environmental Justice, University of California, Irvine

- 2022 National Science Foundation (NSF) funded Summer Research Experience for Undergraduates (REU), Columbia Climate School, Columbia University
- 2022 Institutional Stimulus Scholarship for Researchers (BEIFI), Instituto Politécnico Nacional (IPN)

### **PRESENTATIONS & WORKSHOPS**

- 2023 **Poster presentation**, 6<sup>th</sup> Annual Environmental Research Symposium, School of Physical Sciences, UC Irvine, CA
- 2023 **Student**, ICTP-CLIVAR Summer School on Marine Heatwaves: Global Phenomena with Regional Impacts, Trieste, Italy
- 2023 **Poster presentation**, Effects of Climate Change on the World's Ocean (ECCWO-5) Symposium. Bergen, Norway
- 2023 **Oral presentation**, National Institute of Atmospheric Sciences and Climate Change, CdMx
- 2022 **Poster Presentation**, RAUGM Conference: Annual Reunion of the Mexican Geophysical Union, CdMx
- 2022 **Poster Presentation**, Institute of Atmospheric Sciences and Climate Change Congress, CdMx
- 2022 **Poster Presentation**, Columbia University, Columbia Climate School, NY
- 2021 **Oral presentation**, Department of Earth Sciences, National Polytechnic Institute (IPN), CdMx

### **TECHNICAL SKILLS & EXPERIENCE**

- Languages: English, Spanish
- Programming: Python, Matlab
- Git Version Control and GitHub
- Software: MS Office, Adobe PS, Adobe Lightroom, NVivo
- OS: macOS, Windows

### **CERTIFICATIONS**

- 09/23 – *present* Certificate in Climate Change and Environmental Justice, University of California, Irvine, CA
- 09/23 – *present* Certificate in Community-Based Research, University of California, Irvine, CA
- 2021- 2023 Certificate in Professional Photography, School of Photography and Visual Media, Mexico City, MX

### **REFERENCES**

- Dr. Henri F. Drake, Assistant Professor, Department of Earth System Science, University of California, Irvine. email: [hfdrake@uci.edu](mailto:hfdrake@uci.edu) (*current P.I.*)
- Dr. Kathleen R. Johnson, Associate Professor, Department of Earth System Science, University of California, Irvine. email: [kathleen.johnson@uci.edu](mailto:kathleen.johnson@uci.edu) (*current P.I.*)
- Dr. Jorge Zavala, Director, Instituto de Ciencias de la Atmósfera y Cambio Climático, Universidad Nacional Autónoma de México (UNAM), México. email: [jzavala@atmosfera.unam.mx](mailto:jzavala@atmosfera.unam.mx)