

# MATTHEW T. LUONGO

mattluongo.github.io

+1-508-298-9329 ◊ mluongo@ucsd.edu

## EDUCATION

---

**Scripps Institution of Oceanography**  
**University of California, San Diego**

*La Jolla, CA*

Ph.D., Oceanography

Expected Spring 2024

M.S., Oceanography

2020

*Advisors:* Professors Shang-Ping Xie & Ian Eisenman

*Committee Members:* Professors Nicholas Lutsko, Jennifer Burney, & Shantong Sun

**Harvard University**

*Cambridge, MA*

A.B., Earth & Planetary Sciences, *Magna Cum Laude with Highest Honors*

2017

A.B., Engineering Sciences

*Advisor:* Professor Peter Huybers

*Thesis:* Comparison & Calibration of Climate Proxy Data in Medieval Europe

## EMPLOYMENT

---

**Scripps Institution of Oceanography, UCSD**  
Graduate Student Researcher

Sep. 2019 - Present  
San Diego, CA

**Wildlands Trust**  
Research Assistant

Oct. 2018 - Sep. 2019  
Plymouth, MA

**West Monroe Partners**  
Energy & Utilities Experienced Consultant

Aug. 2017 - Sep. 2018  
New York, NY

**Harvard University, Dept. of Earth & Planetary Sciences**  
Undergraduate Research Assistant

Apr. 2015 - May 2017  
Cambridge, MA

## RESEARCH PUBLICATIONS

---

### Published

6. **Luongo, M.T.**, Brizuela, N.G., Eisenman, I., & Xie, S.-P. (2024). Retaining Short-Term Variability Reduces Mean State Biases in Wind Stress Overriding Simulations. *Journal of Advances in Modeling Earth Systems*, 16, e2023MS003665. doi: [10.1029/2023MS003665](https://doi.org/10.1029/2023MS003665).
5. Tseng, H.-Y., Hwang, Y.-T., Xie, S.-P., Kang, S.M., Tseng, Y.-H., **Luongo, M.T.**, & Eisenman, I. (2023). Fast and Slow Responses of the Tropical Pacific to Radiative Forcing in Northern High Latitudes. *Journal of Climate*, 36(16), pp. 5337-5349. doi: [10.1175/JCLI-D-22-0622.1](https://doi.org/10.1175/JCLI-D-22-0622.1)
4. **Luongo, M.T.**, Xie, S.-P., Eisenman, I., Hwang, Y.-T., & Tseng, H.-Y. (2023). A Pathway for Northern Hemisphere Extratropical Cooling to Elicit a Tropical Response. *Geophysical Research Letters*, 50, e2022GL100719. doi: [10.1029/2022GL100719](https://doi.org/10.1029/2022GL100719)
3. Lutsko, N.J., **Luongo, M.T.**, Wall, C.J., & Myers, T.A. (2022). Correlation Between Cloud Adjustments and Cloud Feedbacks Responsible for Larger Range of Climate Sensitivities in CMIP6. *Journal of Geophysical Research: Atmospheres*, e2022JD037486. doi: [10.1029/2022JD037486](https://doi.org/10.1029/2022JD037486)

2. **Luongo, M.T.**, Xie, S.-P., & Eisenman, I. (2022). Buoyancy Forcing Dominates the Cross-Equatorial Ocean Heat Transport Response to Northern Hemisphere Extratropical Cooling. *Journal of Climate*, 35(20), pp. 3071-3090. doi: [10.1175/JCLI-D-21-0950.1](https://doi.org/10.1175/JCLI-D-21-0950.1)
1. **Luongo, M.T.**, Kurbatov, A.V., Erhardt, T., Mayewski, P.A., McCormick, M., More, A.F., Spaulding, N.E., Wheatley, S.D., Yates, M.G., & Bohleber, P.D. (2017). Possible Icelandic Tephra Found in European Colle Gnifetti Glacier. *Geochemistry, Geophysics, Geosystems*, 18(11), pp. 3904-3909. doi: [10.1002/2017GC007022](https://doi.org/10.1002/2017GC007022)

### Submitted

1. Wan, J.S., Chen, C.-C.-J., Tilmes, S., **Luongo, M.T.**, Richter, J.H., & Ricke, K. Diminished Efficacy of Regional Marine Cloud Brightening in a Warmer World. Manuscript in review at *Nature Climate Change*.

### HONORS & AWARDS

---

<b>2024</b>	Outstanding Student Presentation Award (AGU23)
<b>2023</b>	Outstanding Student Presentation Award (CalGFD)
<b>2022-2025</b>	FINESST Graduate Research Fellowship (NASA)
<b>2022</b>	Outstanding Teaching Assistant (SIO)
<b>2021</b>	GRFP Honorable Mention (NSF), Outstanding Student Mentor (SIO)
<b>2019-2020</b>	Regents Fellowship (UCSD)
<b>2017</b>	Hoopes Prize for Outstanding Senior Thesis Work (Harvard University)
<b>2015</b>	Undergraduate Summer Research Fellow (Harvard University Center for Environment)
<b>2013</b>	National Merit Program Commended Scholar, John Joseph Moakley Scholar
<b>2012</b>	Eagle Scout

### PRESENTATIONS

---

#### Conference Presentations

6. AGU Fall Meeting, San Francisco, CA, USA (Dec. 2023): *Tropical Pacific Responses to Idealized Subtropical Low Cloud Forcing through Subsurface Oceanic Adjustment.*
5. CalGFD, La Jolla, CA, USA (Sep. 2023): *Stress Management Techniques: Overriding Wind Stress in GCMs.*
4. AGU Fall Meeting, Chicago, IL, USA (Dec. 2022): *Surface and Subsurface Ocean Adjustment and Tropical Pattern Formation Responses to Extratropical Radiative Forcing.*
3. Scripps Student Symposium, La Jolla, CA, USA (Sep. 2022): *A Surface Pathway by which Northern Hemisphere Extratropical Cooling Elicits a Tropical Response.*
2. CalGFD, Pasadena, CA, USA (Aug. 2022): *A Surface Pathway by which Northern Hemisphere Extratropical Cooling Elicits a Tropical Response.*
1. AGU Fall Meeting, New Orleans, LA, USA (Dec. 2021): *The Ocean's Dynamic Response to Northern Hemisphere Cooling and Insights into Cross-Equatorial Energy Transport.*

#### Conference Posters

4. AGU Fall Meeting, San Francisco, CA, USA (Dec. 2023): *Stress Management Techniques: Comparing Wind Stress Overriding Methods in GCMs.*
3. Atlantic Variability and Tropical Basin Interactions Workshop, International Centre for Theoretical Physics, Trieste, Italy (Aug. 2023): *Tropical Subsurface Dynamic Adjustment and Pattern Formation Responses to Idealized Subtropical Low Cloud Forcing.*

2. Graduate Climate Conference, Pack Forest, WA, USA (Oct. 2022): *Coupled Ocean-Atmosphere Processes Lead to La Niña-like Steady-State Response to NH Extratropical Cooling*.
1. Graduate Climate Conference, Virtual (Oct. 2020): *Western European Heatwave Identified in Historical Texts and Paleoclimate Reconstructions*.

### Invited Presentations & Seminars

2. Equilibrium Climate Sensitivity & Cloud Feedback Symposium, Virtual (Aug. 2022): *A Surface Pathway by which Northern Hemisphere Extratropical Cooling Elicits a Tropical Response*.
1. NOAA Climate Sensitivity Task Force Meeting, Virtual (Mar. 2022): *Correlation between Cloud Adjustments and Cloud Feedbacks Responsible for Larger Range of Climate Sensitivities in CMIP6*.

## TEACHING & MENTORING

---

### Teaching Assistant

*Dynamics of the Atmosphere and Climate* (SIO 173), UCSD. 2021. Instructors: Shang-Ping Xie & Ian Eisenman.

*Frontiers and Foundations of Modern Chemistry: A Molecular and Global Perspective* (PS 11), Harvard University. 2015-2017. Instructors: Jim Anderson & Gregg Tucci.

### Guest Lecturer

*Dynamics of the Atmosphere and Climate* (SIO 173), UCSD. 2023. Instructor: Shang-Ping Xie.

*Numerical Modeling of the Climate System* (SIO 224), UCSD. 2022. Instructor: Ian Eisenman.

### Research Mentor

Jun-Young Moon, MS student, Yonsei University.

### Peer Mentor

Jessica Wan, SIO.

Laney Wicker, SIO.

SIO-Ask, mentoring program for underrepresented graduate school applicants, 2022-present.

## LEADERSHIP AND SERVICE

---

### Department

SIO Climate Journal Club: Seminar Organizer (2020-present).

SIO Peer Mentor Leadership Team (2021-2022).

SIO Graduate Student Council Climate Sciences Curricular Group Representative (2021-2022).

SIO GFD Faculty Search Committee (2022).

### Field

CalGFD Organizing Committee (2023).

Peer Review: *Journal of Climate*, *Weather & Climate Dynamics*, *Nature Communications*.

## COMPUTER SKILLS

---

**Substantial Experience:** Matlab, Python, Fortran 77/90, R, ArcGIS

**Additional Experience:** C, HTML, Javascript

## GENERA

---

**Memberships:** American Geophysical Union, Sierra Club, Wildlands Trust

**Languages:** English, Latin (8 years)

**Interests:** Camping, Hiking, Punk Rock, National Parks, Land Conservation, New England Sports, Vinyl Records, Amateur Fermentation