

# Celeste T. Pallone, Ph.D.

Postdoctoral Associate

Department of Earth, Atmospheric, and Planetary Sciences

Massachusetts Institute of Technology

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## SUMMARY

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Paleoceanographer experienced in isotope geochemistry (stable and radiogenic), micropaleontology, and sedimentology. I use marine sediments to study tropical ocean-atmosphere interactions and ENSO in the eastern equatorial Pacific over recent glacial cycles, North Atlantic deep ocean circulation across the Pleistocene, and changes in global climate and ocean circulation across the Eocene.

## EDUCATION

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- 2019-25     **Ph.D., Columbia University**, Earth and Environmental Sciences  
Dissertation: Multi-Proxy Paleoceanographic Reconstructions of the Late Pleistocene Eastern Equatorial Pacific  
Advisor: Jerry F. McManus  
Committee: Braddock Linsley and Gisela Winckler
- 2019        **B.A., Barnard College**, Environmental Science  
Departmental honors, Phi Beta Kappa, magna cum laude
- 2017        C-276, *SSV Corwith Cramer*, Sea Education Association Semester

## APPOINTMENTS

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- 2024-25     Postdoctoral Associate, Massachusetts Institute of Technology  
Advisor: David McGee
- 2022        Sedimentologist, *R/V JOIDES Resolution*  
IODP Expedition 397: Iberian Margin Paleoclimate
- 2018-19     Undergraduate Research Assistant, Lamont-Doherty Earth Observatory (LDEO)  
Long Island Sound Mapping Project & GEOTRACES

## PUBLICATIONS

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- Pallone, C.T.**, McManus, J.F., Jacobel, A.W. (2025). Eastern equatorial Pacific paleo-productivity and carbon cycling during the Late Pleistocene. *Earth and Planetary Science Letters*, 656, 119255. <https://doi.org/10.1016/j.epsl.2025.119255>.
- Pallone, C.T.**, Morris, C., Holmes, K., McManus, J.F. Orbital forcing of the eastern equatorial Pacific thermocline in the late Pleistocene. In review at *Nature Communications*, 01/2025.
- Hodell, D.A., Abrantes, F., Alvarez Zarikian, C.A., and **the Expedition 397 Scientists** (2024). Iberian Margin Paleoclimate. Proceedings of the International Ocean Discovery Program, 397. IODP. <https://doi.org/10.14379/iodp.proc.397.2024>.
- Hodell, D.A., Abrantes, F., Alvarez Zarikian, C.A., and **the Expedition 397 Scientists** (2023).

Expedition 397 Preliminary Report: Iberian Margin Paleoclimate. IODP.  
<https://doi.org/10.14379/iodp.pr.397.2023>.

## **AWARDS & FELLOWSHIPS**

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2023-24	Schlanger Fellowship, IODP-US Science Support Program (USSSP)
2019	Dean's Fellowship, Graduate School of Arts and Sciences, Columbia University
2019	Grace Potter Rice Prize in the Natural Sciences, Barnard College
2019	Anne Davidson Prize in Environmental Science, Barnard College

## **FUNDING**

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2023-24	Post-Expedition Activity Award, IODP-USSSP	\$20,000
	Jerry McManus as administrative PI	
2021	Graduate Student Travel Grant, Columbia University	\$800
2018	Fall Meeting Student Travel Grant, American Geophysical Union	\$500
2017	Student Travel Grant, Earth Institute, Columbia University	\$750

## **TEACHING EXPERIENCE**

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2024	Course Assistant, Columbia University EESC U2100: Climate Systems
2022-23	Guest Lecturer, Columbia University EESC GU4330: Terrestrial Paleoclimate (Ocean Circulation Past and Present) EESC U2100: Climate Systems (Deep Ocean Circulation, Ocean Chemistry, and Introduction to Paleoclimate I & II)
2020-21	Graduate Teaching Assistant, Columbia University EESC U2100: Climate Systems EESC U3010: Field Geology (Barbados)
2018-19	Undergraduate Teaching Assistant, Columbia University EESC U2200: Solid Earth Systems EESC U3017: Environmental Data Analysis
2015-17	Elementary School Summer Teaching Intern, St. Albans School for Boys

## **MENTORSHIP**

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2024	Cire Portegies, LDEO Summer Intern
2024	Martin Aguilar Solano, LDEO Summer Intern
2024	Christopher Cumbe, LDEO Summer Intern
2024	Naomi Bonilla, LDEO Summer Intern
2023-24	Yaiza Kinney, Columbia Climate School Graduate Research Assistant
2023-24	Macy Matthews, Columbia University Undergraduate Intern
2023-24	Radha Carollo, Columbia University Undergraduate Intern
2023-24	Helen Latting, LDEO Summer Intern & Columbia University Senior Thesis

2023-24 Isabel Plower, Columbia University Senior Thesis  
 2022-24 Lianna Pront, Barnard College Undergraduate Intern  
 2022-24 Lexy Prior, Columbia University Undergraduate Intern  
 2023 Sydney Smith, LDEO Summer Intern  
 2023 Cidney McMahon, LDEO Summer Intern  
 2023 Erin Kim, LDEO Summer Intern  
*Now a Ph.D. student at University of Michigan*  
 2023 Amanda Perrone, LDEO Summer Intern  
 2023 Vivian Jackson, Columbia University Undergraduate Intern  
 2022-23 Arjana Ejupi, Columbia Climate School Graduate Research Assistant  
 2022-23 Alexandra O’Keefe, LDEO Summer Intern & SUNY Albany Senior Thesis  
*Now a Ph.D. student at University of Arizona*  
 2021-22 Karine Holmes, LDEO Summer Intern & Iowa State University Senior Thesis  
*Now a Ph.D. student at University of Rochester*  
 2019-22 Chandler Morris, Laidlaw Fellow & Columbia University Senior Thesis  
*Now a Ph.D. student at Brown University*  
 2020-21 Bryn Stecher, Columbia University Earth Institute Intern

#### **CONFERENCE PRESENTATIONS & SEMINARS (First Author and Convenor Only)**

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Fastovich, D., Anderson, C.H., Belanger, B., Kinsley, C.W., **Pallone, C.T.** Climate Reconstruction from the Pacific Region: Insights into Past Oceanic and Atmospheric Conditions. (Early Career Convenor). 2024 AGU Fall Meeting.

**Pallone, C.T.**, Holmes, K., Morris, C.M., McManus, J.F. Orbital forcing of the eastern equatorial Pacific thermocline in the late Pleistocene. (Poster). 2024 AGU Fall Meeting.

**Pallone, C.T.**, Jacobel, A.W., McManus, J.F. Eastern equatorial Pacific paleo-productivity did not drive global carbon cycling during the late Pleistocene. (Talk). 2023 AGU Fall Meeting.

**Pallone, C.T.**, Low Latitude Insolation Forcing of the Eastern Equatorial Pacific in the Late Pleistocene Inferred from Thermocline Reconstructions. (Talk). 2023 Graduate Climate Conference.

**Pallone, C.T.**, Eastern equatorial Pacific paleo-productivity during the late Pleistocene: insights from uranium series isotope proxies. (Talk). 2023 Comer Climate Conference.

**Pallone, C.T.**, Unraveling Paleo-Productivity in the Eastern Equatorial Pacific with U, Th, and Pa. (Talk). 2023 Climate and Paleo Seminar Series, Woods Hole Oceanographic Institution.

**Pallone, C.T.**, McManus, J.F., Jacobel, A.W. Synthesizing Late Pleistocene Paleo-Productivity Records from ODP Site 1240 with New Insights from U-Th-Pa Measurements. (Poster). 2022 International Conference on Paleoceanography 14.

**Pallone, C.T.**, McManus, J.F., Evaluating Orbital Forcing on the Eastern Equatorial Pacific Thermocline and El Niño-Southern Oscillation during Marine Isotope Stage 5. (Talk). 2021 Comer Climate Conference.

- Pallone, C.T.,** McManus, J.F. Reconstructing the Variability of the El Niño-Southern Oscillation During Marine Isotope Stage 5 at ODP Site 1240 Using Individual Foraminifera Analyses of *Globigerinoides ruber* (white). (Poster). 2020 AGU Fall Meeting.
- Pallone, C.T.,** McManus, J.F. Primary productivity and thermocline structure in the Eastern Equatorial Pacific over the last 200,000 years. (Talk). 2019 PaleoENSO Workshop.
- Pallone, C.T.,** Nitsche, F.O., Kenna, T.C., McHugh, C.M. Surface Sediment Texture in the Eastern Long Island Sound. (Poster). 2018 AGU Fall Meeting.

## COMMUNITY AND PROFESSIONAL ACTIVITIES

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| 2023-24 | Volunteer, Barnard College Environmental Science Pathways Scholar Program    |
| 2018-24 | Member, American Geophysical Union   |
| 2023-24 | Co-Organizer, LDEO Protactinium, Ionium, Thorium, Helium (PITHe) Seminar     |
| 2023-24 | Alumni and Postdoc Liaison, Dept. of Earth and Environmental Sciences (DEES) |
|         | Graduate Student Council   |
| 2022-23 | Student Representative, LDEO Executive Committee                             |
| 2021-23 | Co-Organizer, LDEO Colloquium  |
| 2022    | Ship-to-Shore Broadcaster, <i>R/V JOIDES Resolution</i>                      |
| 2022    | Undergraduate Mentor, Women in Science at Columbia University                |
| 2021    | Volunteer, Girls' Science Day, Columbia University                           |
| 2020-21 | Co-Organizer, LDEO Geochemistry Seminar                                      |
| 2019-20 | Co-Organizer, LDEO Geochemistry Coffee Hour                                  |
| 2019    | Volunteer, LDEO Wally Broecker Symposium                                     |
| 2019    | Outreach Volunteer, LDEO Core Repository                                     |
| 2018    | Tour Guide, Barnard College Office of Admissions                             |
| 2017    | Constituent Services Intern, New York State Senator Daniel Squadron          |