

# Jacob T. Cohen

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University of Washington  
Seattle, WA 98195

## Education

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Ph.D., Oceanography, Advanced Data Science Option <i>The Ocean's Role in Air-Sea Interaction and Climate Predictability</i> University of Washington	Expected June 2025
M.S., Oceanography, University of Washington	2023
B.A., Physics, Carleton College	2019

## Research Experience

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Graduate Research Assistant, University of Washington <i>Advisor: LuAnne Thompson</i> - Studying the ocean's role in driving surface heat flux feedback and air-sea interaction. - Evaluating the predictive skill of marine heatwaves and Arctic sea ice in the CESM Seasonal-to-Multiyear Large Ensemble (SMYLE).	2019-present
REU Research Assistant, The Pennsylvania State University <i>Advisors: Sukyoung Lee, Raymond Najjar, Qian Li</i>	2018
Undergraduate Research Assistant, Universidad Nacional de Costa Rica <i>Advisors: Sergio Molina, Vanessa Valerio Hernandez, Fabiola Rodriguez, Javier Espeleta</i>	2017

## Publications (in prep)

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**Cohen, J. T.**, Deppenmeier, A.-L., Maroon, E., Cai, C., Thompson, L., Object-based evaluation of marine heatwave predictions, *GRL*

**Cohen, J. T.**, Thompson, L., Seasonal roles of the ocean and the atmosphere in driving the surface heat flux feedback, *JGR: Oceans*

Cai, C., Thompson, L., Deppenmeier A.-L., **Cohen, J. T.**, Maroon, E., Staneva, V., Whitt, D., Atmospheric drivers of marine heatwaves in the North Pacific Ocean

Kohlman, K., Mogen, S., **Cohen, J. T.**, Araujo, J., Bonino, G., Beaudin, E., Lovenduski, N. S., Surface and subsurface biogeochemical impacts of the 2019 Northeast Pacific marine heatwave, *GRL*

Richter, J. H. & Coauthors (incl. **Cohen, J. T.**) (2024) Earth system predictability across time scales for a resilient society: A research community perspective, *Bull. Am. Meteorol. Soc.*

## Presentations

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**Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Object-Based Evaluation of Marine Heatwave Predictions, AGU Fall Meeting, 9-13 Dec. 2024, poster, *upcoming*

- Cohen, J. T.**, Yeager, S., Thompson, L., Cheng, W., Sources of Predictability in Skillful Arctic Sea Ice Forecasts, Graduate Climate Conference, 1-3 Nov. 2024, oral
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E. Object-Based Evaluation of Marine Heatwave Forecasts, NOAA's Subseasonal and Seasonal Applications Workshop, 5 Sept. 2024, oral (remote)
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Meeker, E., Object-Based Evaluation of Marine Heatwave Predictions, Liège Colloquium on Ocean Dynamics, 30 May 2024, oral
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Meeker, E., Object-Based Evaluation of Marine Heatwave Predictions, Earth System Predictability Across Timescales Workshop, 10-12 Apr. 2024, poster
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Meeker, E., Object-Based Evaluation of Marine Heatwave Predictions in SMYLE, CESM Earth System Prediction Working Group Meeting, 5 Mar. 2024, oral (remote)
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Meeker, E., Predicting the Spatiotemporal Evolution of Marine Heatwaves, Ocean Sciences Meeting 2024, 22 Feb. 2024, oral
- Cohen, J. T.**, Thompson, L., Cai, C., Deppenmeier, A., Maroon, E., Meeker, E., Predicting the Spatiotemporal Evolution of Marine Heatwaves, Graduate Climate Conference, 2-4 Nov. 2023, oral
- Cohen, J. T.**, Thompson, L., Cai, C., Predicting the Spatiotemporal Evolution of Marine Heatwaves, ICTP-CLIVAR Summer School on Marine Heatwaves, 24-29 Jul. 2023, poster
- Cohen, J. T.**, Cai, C., Staneva, V., Thompson, L., Characterizing the spatio-temporal evolution of marine heatwaves, UW Data Science Seminar, 12 Apr. 2023, oral
- Cohen, J. T.**, Thompson, L., The seasonal cycle of the ocean's role in driving air-sea interaction, 2023 US CLIVAR Mesoscale and Frontal-Scale Air-Sea Interactions Workshop, 6-8 Mar. 2023, poster
- Cohen, J. T.**, Thompson, L., Seasonal variation in the relative roles of oceanic and atmospheric processes in driving air-sea interaction, Abstract OS13B-08, AGU Fall Meeting, 12 Dec. 2022, oral
- Cohen, J. T.**, Thompson, L., Quantifying the relative roles of atmospheric and oceanic processes in driving air-sea interaction in the Gulf Stream Region, Graduate Climate Conference, 28-30 Oct. 2023, poster
- Cohen, J. T.**, Thompson, L., Quantifying the relative roles of atmospheric and oceanic processes in driving air-sea interaction in the Gulf Stream Region, 2022 US CLIVAR Whither the Gulf Stream Workshop, 15-17 June 2022, poster/lightning talk
- Cohen, J. T.**, Thompson, L., Seasonal Variation in the Effective Depth of Air-Sea Interaction, Ocean Sciences Meeting, 4 Mar. 2022, oral (remote)
- Cohen, J. T.**, Thompson, L., The Effective Depth of Air-Sea Interaction, Oceanography Graduate Student Symposium, 5 Nov. 2021, oral

- Cohen, J. T.**, Thompson, L., The Effective Depth of Air-Sea Interaction on Monthly and Seasonal Timescales, Graduate Climate Conference, 29–31 Oct. 2021, poster (remote)
- Cohen, J. T.**, et al., Actionable Community-Oriented Research eNgagement (ACORN) with the UW Program on Climate Change, Northwest Climate Conference, 6-8 Apr. 2021, lightning talk (remote)
- Cohen, J. T.**, Thompson, L., Drushka, K., Timescales of Atmosphere-Ocean Interaction in the Southern Ocean, Abstract A055-05, AGU Fall Meeting, 8 Dec. 2020, oral (remote)
- Cohen, J. T.**, Thompson, L., Drushka, K., Timescales of Atmosphere-Ocean Interaction in the Southern Ocean, presented at 2020 Graduate Climate Conference, 30 Oct. - 1 Nov. 2020, poster (remote)
- Cohen, J. T.**, Lee, S., Li, Q., Najjar, R. G., Is Jet-Scale Overturning Circulation Present in the North Atlantic Ocean?, Abstract OS43C-2090, AGU Fall Meeting, 10-14 Dec. 2018, poster
- Cohen, J. T.**, Lee, S., Li, Q., Najjar, R. G., Is Jet-Scale Overturning Circulation Present in the North Atlantic Ocean?, Carleton College Student Research Symposium & Celebration, 19 Oct. 2018, poster

### **Software**

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Ocetrac (<https://github.com/ocetrac/ocetrac>)

heatwave3 (<https://robwschlegel.github.io/heatwave3/index.html>)

### **Fellowships and Awards**

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CICOES Graduate Student Fellowship	2025
Graubard Fellowship in the Program on Climate Change	2023
NSF GRFP Honorable Mention	2021
University of Washington Provost's Fellowship	2019-2020
Kolenkow-Reitz Undergraduate Research Fellowship	2018

### **Community Engagement and Service**

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Reviewer, Journal of Climate, American Meteorological Society	2023-2024
Liaison, Actionable Community-Oriented Research eNgagement (ACORN) and the Clean Energy Transition Institute	2021-2024
Member, Program on Climate Change Graduate Steering Committee	2020-2022
Lead, Actionable Community-Oriented Research eNgagement (ACORN)	2020-2022
Executive Committee Member, Graduate Climate Conference	2020, 2022
Chair, Graduate Climate Conference	2021
Convener, Innovative Initiatives in Conducting Community-Based Science and Training the Next Generation of Practitioners (AGU Fall Meeting)	2021
Member, Summer Committee for Social and Environmental Justice	2020
Volunteer, Climate Change // Curiosity Expo	2020

## **Teaching Experience**

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Guest Speaker, Data Science in Oceanography Summer Research Program <i>Object-Based Evaluation of Marine Heatwave Predictions</i>	2024
Guest Lecturer, ATM S 220: Exploring the Atmospheric Sciences <i>The Ocean and the Climate: Air-sea interaction, climate variability, and marine heatwaves</i>	2024
Teaching Assistant, Ocean 285–Physics Across Oceanography: Fluid Mechanics and Waves, University of Washington	2021, 2024
Guest Speaker, Data Science in Oceanography Summer Research Program <i>Detecting Tracking, and Predicting Marine Heatwaves</i>	2024

## **Workshops**

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Physical Oceanography Dissertation Symposium XIII	2024
NOAA’s Subseasonal and Seasonal Applications Workshop	2024
Earth System Predictability Across Timescales Workshop (NSF NCAR)	2024
US CLIVAR Summit	2023
ICTP-CLIVAR Summer School on Marine Heatwaves	2023
US CLIVAR Mesoscale and Frontal-Scale Air-Sea Interactions Workshop	2023
Grid SST Hackathon (University of Washington)	2022
NASA Summer School on Satellite Observations and Climate Models	2022
US CLIVAR Whither the Gulf Stream Workshop	2022
CESM Tutorial (NSF NCAR)	2020