

# Jed E. Lenetsky

PHD CANDIDATE, DEPARTMENT OF ATMOSPHERIC AND OCEANIC SCIENCES (ATOC), UNIVERSITY OF COLORADO - BOULDER  
POLAR AND PALEOCLIMATE RESEARCH GROUP, INSTITUTE OF ARCTIC AND ALPINE RESEARCH (INSTAAR)

[✉ jed.lenetsky@colorado.edu](mailto:jed.lenetsky@colorado.edu) | [↗ jedlenetsky.github.io/](https://github.com/jedlenetsky)

## Education

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### PhD, Atmospheric and Oceanic Sciences

UNIVERSITY OF COLORADO - BOULDER

- Thesis - Mechanisms and impacts of present and future ocean change in Baffin Bay
- Supervisor - Alexandra Jahn

Aug. 2021 - May 2026

Boulder, Colorado, USA

### Master of Arts, Geography

UNIVERSITY OF COLORADO - BOULDER

- Thesis - Understanding Bering Strait ocean heat transport variability for seasonal sea ice forecasting in the Chukchi Sea
- Supervisor - Mark Serreze

Aug. 2019 - May. 2021

Boulder, Colorado, USA

### Bachelor of Arts and Science with First Class Honors, Environmental Science

MCGILL UNIVERSITY

- Thesis - The Variability and Predictability of the Bering Strait Ocean Heat Flux and Arctic Ocean Sea Ice Extent
- Supervisor - Bruno Tremblay

Aug. 2015 - May. 2019

Montreal, Quebec, Canada

## Refereed Publications

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\* denotes mentee

### PUBLISHED

2. **Lenetsky, J. E.**, & Serreze, M. C. (2021). Statistical modeling of the Bering Strait throughflow for operational sea ice forecasting in the Chukchi Sea. *Geophysical Research Letters*, 48, e2021GL092939. DOI: [10.1029/2021GL092939](https://doi.org/10.1029/2021GL092939).
1. **Lenetsky, J. E.**, Tremblay, B., Brunette, C., & Meneghelli, G. (2021). Sub-seasonal predictability of Arctic Ocean sea ice conditions: Bering Strait and Ekman-driven ocean heat transport. *Journal of Climate*, 34(11), 4449-4462. DOI: [10.1175/JCLI-D-20-0544.1](https://doi.org/10.1175/JCLI-D-20-0544.1).

### UNDER-REVIEW

2. **Lenetsky, J. E.**, Jahn A., Ugrinow\*, P., Wyburn-Powell, C. R., Patel\*, R., & Zanowski, H. Future Sea Ice-Ocean and Biological Productivity Changes in the North Water Polynya Region under Policy Relevant Warming Levels. *Journal of Climate*. Preprint available at DOI: [10.31223/X5X6J](https://doi.org/10.31223/X5X6J).
1. Leist, L. G. T., Castrillejo, M., Azetsu-Scott, K., Lee, C. M., **Lenetsky, J. E.**, Ringuette, M., Vockenhuber, C., Pérez-Tribouillier, H., & Casacuberta, N. Radionuclide tracers reveal new Arctic pathways shaping water mass mixing and formation in Baffin Bay and Labrador Sea. *Ocean Sciences*. Preprint available at DOI: [10.5194/egusphere-2025-4178](https://doi.org/10.5194/egusphere-2025-4178).

## Research Appointments

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### Institute of Arctic and Alpine Research, University of Colorado - Boulder

Boulder, CO

RESEARCH ASSISTANT

July 2021 - Present

- Reprocessed and conducted quality control for 17 years of temperature and salinity measurements (~415 instrument records) from the Davis Strait mooring array.
- Produced an improved gridded product of Davis Strait temperature, salinity, and velocity, which has been used to update the timeseries of Davis Strait ocean transports (currently in preparation for submission to *Journal of Physical Oceanography*).
- Analyzing the Baffin Bay ocean and sea ice circulation in observations and climate models. Publication on North Water Polynya undergoing 3rd round of review at *Journal of Climate* with additional manuscripts in planning and preparation.

### Department of Geography, University of Colorado - Boulder

Boulder, CO

RESEARCH ASSISTANT

May 2020 - August 2020

- Developing an operational statistical forecast of sea ice advance and retreat date in the Chukchi Sea. Published in *GRL* at DOI: [10.1029/2021GL092939](https://doi.org/10.1029/2021GL092939)

### National Snow and Ice Data Center, University of Colorado - Boulder

Boulder, CO

SEA ICE ANALYST

October 2019 - May 2021

- Perform monthly reviews and scientific analysis of Arctic sea ice conditions and their associated atmospheric and oceanic conditions.
- Lead science writer for the February 2020 and 2021 reviews of sea ice conditions (available [here](#) and [here](#)).

- This independent research project examined subseasonal sea ice predictability in the western Arctic Ocean supervised by Prof. Bruno Tremblay.
- Received an undergraduate research awards from the National Science and Engineering Council of Canada (NSERC) and Fonds de Recherche du Québec.
- Key findings published in the *Journal of Climate* at DOI: [10.1175/JCLI-D-20-0544.1](https://doi.org/10.1175/JCLI-D-20-0544.1).

## Fellowships & Awards

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### GOVERNMENTAL

2021	<b>Honorable Mention, Graduate Research Fellowship Program</b> , National Science Foundation	N/A
2019	<b>Undergraduate Science Research Award (USRA) in Atmospheric and Oceanic Sciences</b> , National Science and Engineering Research Council of Canada	\$7000 CAD
2019	<b>Provincial Supplement for USRA in Atmospheric and Oceanic Sciences</b> , Fonds de Recherche du Quebec	\$2000 CAD

### INSTITUTIONAL

2026	<b>Fellowship in Atmospheric and Oceanic Sciences</b> , University of Colorado - Boulder	\$2475 USD
2026	<b>Dissertation Completion Fellowship</b> , University of Colorado - Boulder	\$14,985 USD
2024	<b>Lead Teaching Assistant Fellowship</b> , University of Colorado - Boulder	\$2500 USD
2024	<b>ATOC Department Service Award</b> , University of Colorado - Boulder	\$200 USD
2024	<b>University of Colorado Summer Scholars Fellowship (Declined)</b> , University of Colorado - Boulder	\$6000 USD
2024	<b>INSTAAR Diversity, Equity, and Inclusion Summer Scholars Fellowship</b> , University of Colorado - Boulder	\$9237 USD
2023	<b>Fellowship in Atmospheric and Oceanic Sciences</b> , University of Colorado - Boulder	\$2635 USD
2022	<b>Fellowship in Atmospheric and Oceanic Sciences</b> , University of Colorado - Boulder	\$3875 USD
2018	<b>Dr. Olav Loken Undergraduate Geography Award for Northern Research</b> , McGill University	\$800 CAD
2018	<b>Irene Woods Field Study Award</b> , McGill University	\$1000 CAD
2018	<b>Mobility Award</b> , McGill University	\$3000 CAD
2018	<b>Laboratories Without Borders Award</b> , McGill University	\$2500 CAD

### MEETINGS

2022	<b>Early Career Travel Award</b> , Arctic Sub-Arctic Ocean Fluxes (ASOF) Meeting, Hafnarfjörður, Iceland	\$680 USD
2018	<b>Best Earth Science Poster</b> , McGill Faculty of Science Undergraduate Research Conference, Montreal, Quebec	\$300 CAD

## Skills

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<b>Scientific Programming</b>	MATLAB, Xarray, Numpy, matplotlib, L <sup>A</sup> T <sub>E</sub> X, NETCDF4, CDO, Git/GitHub, bash/shell scripting, R, and Java
<b>Spatio-temporal Statistics</b>	Gaussian Process Regression, Principal Component Analysis, uncertainty quantification
<b>Time series analysis</b>	Spectral and harmonic analysis, digital filtering, complex demodulation
<b>Modeling</b>	Running and modifying CESM code
<b>Software</b>	ArcMap, ENVI, QGIS, and Office Suite

## Academic Presentations

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\* denotes mentee

### INVITED

**Lenetsky, J. E..** (2024, Sep.) *Present and Future Ocean Changes in Baffin Bay: Insights from Models and Observations*. NSIDC Cryosphere Seminar.

### CONTRIBUTED

Weaver\*, C., Jahn, A., Li, L., **Lenetsky, J. E.** (2025, Aug.) *Trapped in the Beaufort Gyre: Is the Arctic Ocean Becoming a Plastic Sink?* [poster presentation]. NSF NCAR, UCAR, UCP, and CIRES summer student research poster symposium.

**Lenetsky, J. E.**, Lee, C. M., Richards, C., Drushka, K., Jahn, A. (2025, May) *An updated observational record of Davis Strait ocean transports, 2004-2024* [oral presentation]. Arctic Sub-Arctic Ocean Fluxes (ASOF) Meeting.

DeHaas\*, B., Cohen\*, A., Mendelssohn\*, J., Sticker, A., **Lenetsky, J. E.**, Jahn, A. (2024, Dec.) *For warming above 2°C, the average time to lose the last 1 million km<sup>2</sup> of Arctic sea ice is shorter for higher emission scenarios* [poster presentation]. 18th annual Earth and Space Science Poster conference.

**Lenetsky, J. E.**, Jahn, A., Ugrinow\*, P., Wyburn-Powell, C., Patel\*, P., Zanowski, H. (2024, June) *Large future changes in the North Water Polynya are most likely if global warming exceeds 2°C* [oral presentation]. CESM Workshop.

**Lenetsky, J. E.**, Lee, C. M., Richards, C., Drushka, K., Jahn, A. (2024, May) *An updated observational record of Davis Strait ocean transports, 2004-2017* [oral presentation]. Arctic Sub-Arctic Ocean Fluxes (ASOF) Meeting.

**Lenetsky, J. E.**, Lee, C. M., Richards, C., Drushka, K., Jahn, A. (2024, February) *An updated observational record of Davis Strait ocean transports, 2004-2017* [oral presentation]. Ocean Sciences Meeting.

**Lenetsky, J. E.**, Jahn, A., Ugrinow\*, P., Wyburn-Powell, C., Patel\*, P., Zanowski, H. (2024, February) *Large future changes in the North Water Polynya are most likely if global warming exceeds 2°C* [oral presentation]. CESM Polar Working Group Meeting.

**Lenetsky, J. E.**, Lee, C. M., Richards, C., Drushka, K., Jahn, A. (2023, May) *An updated observational record of Davis Strait temperature and salinity, 2004-2017* [oral presentation]. Arctic Sub-Arctic Ocean Fluxes (ASOF) Meeting.

**Lenetsky, J. E.**, Lee, C. M., Richards, C., Drushka, K., Jahn, A. (2023, April) *An updated observational record of Davis Strait temperature and salinity, 2004-2017* [poster presentation]. Annual European Geophysical Union (EGU) Meeting.

**Lenetsky, J. E.**, Jahn, A., Myers, P. G., Lee, C. M. *Understanding Davis Strait freshwater flux variability using observations and models* [oral presentation]:

- Aug. 2022: 17th Conference on Polar Meteorology and Oceanography.
- May 2022: Arctic Sub-Arctic Ocean Fluxes (ASOF) Meeting.
- Mar. 2022: NCAR Polar Climate Working Group Meeting.
- Mar. 2022: Ocean Sciences Meeting.

**Lenetsky, J. E.**, Jahn, A., Myers, P. G., Lee, C. M. (2021, Dec.) *Understanding Davis Strait freshwater flux variability using observations and models* [poster presentation]. CU Boulder Earth & Space Science Symposium.

**Lenetsky, J. E.** (2021, Sep.) *The Bering Strait and Seasonal Sea Ice Prediction* [oral presentation]. CU Boulder ATOC Colloquium.

**Lenetsky, J. E.** (2021, June.) *Understanding Bering Strait ocean heat transport variability for seasonal sea ice forecasting in the Chukchi Sea* [oral presentation]. McGill University Sea Ice Group meeting.

**Lenetsky, J. E.**, & Serreze, M. C. (2021, Apr.) *On the interannual variability of spring Bering Strait water temperatures* [e-lightning talk]. INSTAAR 50th International Arctic Workshop.

**Lenetsky, J. E.**, & Serreze, M. C. (2020, Dec.) *Towards an Operational Seasonal Sea Ice Forecast System for the Chukchi Sea* [e-lightning talk]. AGU Annual General Meeting.

**Lenetsky, J. E.**, Tremblay, B., Brunette, C. (2018, Oct.). *The interannual variability and predictability of the Bering Strait heat flux and sea ice extent in the Chukchi Sea* [poster presentation]. McGill Faculty of Science Undergraduate Research Conference.

## Award Winner

## Mentoring

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<b>Cecilia Weaver, Co-advisor, Summer 2025</b>	Community college summer research intern
<b>Blake DeHaas, Research mentor, Fall 2024</b>	ATOCH 3700 undergraduate student
<b>Abbey Cohen, Research mentor, Fall 2024</b>	ATOCH 3700 undergraduate student
<b>Jake Mendelsohn, Research mentor, Fall 2024</b>	ATOCH 3700 undergraduate student
<b>Patrick Ugrinow, Co-advisor, Spring 2022</b>	Undergraduate research assistant
<b>Rajan Patel, Co-advisor, Spring 2022</b>	Undergraduate research assistant

## Teaching Experience

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### ATOCH 3700: Undergraduate Research Experience

*CU Boulder*

TEACHING ASSISTANT

Fall 2024

- Multiple guest lectures on topics such as statistical analysis techniques and the scientific method.
- Mentored students throughout the course on their independent research projects.

### GEOG 4271/5271: The Arctic Climate System

*CU Boulder*

TEACHING ASSISTANT

Spring 2021

- Guest lectured approx. 25 students on sea ice variability, rheology, and ocean-ice-atmosphere interactions
- Assisted the instructor in teaching topics in advanced Arctic science ranging from sea ice dynamics, oceanography, meteorology, permafrost, and glaciology.
- Helped develop homework and exam material.
- Mentored students throughout the course.

## GEOG 2271: Arctic Environment

CU Boulder

### TEACHING ASSISTANT

- Assisted the instructor in teaching topics in advanced Arctic science ranging from sea ice dynamics, oceanography, meteorology, permafrost, and glaciology.
- Helped develop homework and exam material.
- Mentored students throughout the course.

Fall 2019, 2021

## GEOG 1001: Climate and Vegetation

CU Boulder

### TEACHING ASSISTANT

- Led two 30-person lab sections in which I taught material ranging from atmospheric composition and circulation patterns, climate change, basic meteorology, and introductory ecology.
- Helped develop homework and exam material.
- Mentored students throughout the course.

Spring 2019

## Field Work

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**R/V Neil Armstrong, Baffin Bay, Fall 2024** Mooring recovery and deployment; CTD operations; Water sampling

**R/V Neil Armstrong, Baffin Bay, Fall 2022** Mooring recovery and deployment; CTD operations

**McGill High Arctic Research Station, Summer 2018** Permafrost and glacial monitoring

## Academic Service

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2022- present	<b>Committee member and co-lead</b> , Student Concerns Committee	CU Boulder
2022-2024	<b>ATOC REU</b> , Cohort mentor and executive committee member	CU Boulder
2021- present	<b>Journal Reviewer</b> , Reviewer for peer-reviewed publications in Journal of Climate and Journal of Geophysical Research: Oceans	—
2021	<b>Mentor</b> , Graduate Student Peer Mentorship Program	CU Boulder
2021	<b>Mentor</b> , Graduate Application Mentorship Program	CU Boulder
2021	<b>Committee Member</b> , Technology Committee	CU Boulder
2021	<b>Committee Member</b> , Awards Committee	CU Boulder

## Representation and Outreach

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### INSTAAR Directorate

University of Colorado - Boulder

#### GRADUATE STUDENT REPRESENTATIVE

February 2022 - September 2023

- Advocated for graduate students on INSTAAR directorate, working to build a more equitable and inclusive research community
- Re-envisioning and re-designing graduate student work spaces on the INSTAAR safety and inclusion committee

### Academic Senate

McGill University

#### SENATOR

September 2017 - August 2018

- Represented undergraduate students on McGill academic senate, advocating for student rights, equity, and increased student input in University decision-making.
- Sat on Bachelor of Arts and Science Integrative Council Assembly, providing a link between the McGill administration and students in the faculty.
- Worked with other undergraduate representatives and the Student Society of McGill University to advance student body goals.