

# Elizabeth Yankovsky

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## EDUCATION

**Princeton University**, Princeton, NJ  
Ph.D., Atmospheric and Oceanic Sciences, *2015 – present*  
Completed Master's degree in Spring, 2017.  
Advisor: Dr. Sonya Legg

**University of South Carolina Honors College**, Columbia, SC  
B.S., Physics and Geophysics, magna cum laude, *2011-2015*  
Advisors: Drs. Camelia Knapp and Darrell Terry

## RESEARCH EXPERIENCE

**NOAA Geophysical Fluid Dynamics Laboratory, Princeton University**  
Graduate Research Assistant, Ocean & Ice Processes Group, *2015-present*  
Topic: Dense shelf overflows in the Arctic Ocean; instability dynamics.  
Advisors: Drs. Sonya Legg, Robert Hallberg, Rong Zhang

**Geophysical Exploration Laboratory, University of South Carolina**  
Undergraduate Research Assistant, *2012-2015*  
Title: “Methane Hydrates and Cellular Convection in the Central Aleutian Basin”, Advisors: Drs. Camelia Knapp, Darrell Terry

**Oregon State University, College of Earth, Ocean, & Atmospheric Sciences**, NSF-REU program intern, *June-August 2014*  
Title: “Response of the Length and Stratification of the North River Estuary to Changes in Forcing”, Advisor: Dr. James Lerczak

**Rutgers University, Department of Marine and Coastal Sciences**, NSF-REU program intern, *June-August 2013*  
Title: “Quantifying Turbulent Dissipation in a Shallow Estuarine Environment”, Advisor: Dr. Robert Chant

## PUBLICATIONS

[*In preparation*] **Yankovsky, E.**, S. Legg, R. Hallberg, 2019: Parameterizing submesoscale symmetric instability and frontal mixing in dense flows along topography.

**Yankovsky, E.**, S. Legg, 2018: Symmetric and Baroclinic Instability in Dense Shelf Overflows. *Journal of Physical Oceanography*, **49 (1)**, 39-61.

[*Submitted*] Terry, D. A., **E. A. Yankovsky**, C. C. Knapp, 2019: Subspace solutions for seismic velocity analysis. *Geophysical Prospecting*.

**Yankovsky, E. A.**, D. A. Terry, C. C. Knapp, 2015: Seismic and Gravity Evidence for Methane-Hydrate Systems in the Central Aleutian Basin. *Int. J. Earth Sci. Geophys.*, **1-001**.

## CONFERENCE PRESENTATIONS AND SEMINARS

**Yankovsky, E.**, S. Legg, Modeling submesoscale mixing processes in dense shelf overflows. *GFDL Poster Expo*, Princeton, NJ, 2019.

**Yankovsky, E., S. Legg**, Symmetric and baroclinic instability in dense shelf overflows. *EGU General Assembly*, Vienna, Austria, 2019.

**Yankovsky, E., S. Legg**, Symmetric instability in dense shelf overflows. *Ocean Sciences Meeting*, Portland, OR, 2018.

**Yankovsky, E., S. Legg**, Modeling baroclinic and submesoscale instabilities in the Arctic Ocean and how they affect dense water formation. *AOCD Fall Seminar Series*, Yale University, CT, 2018.

**Yankovsky, E., S. Legg**, Baroclinic and symmetric instability in Arctic shelf overflows. *AOS Summer Seminar Series*, Princeton University, NJ, 2018.

**Yankovsky, E., S. Legg**, Dense water formation and transport on the Arctic continental shelves. *Forum for Arctic Ocean Modeling and Observational Synthesis (FAMOS)*, Woods Hole Oceanographic Institution, MA, 2017.

**Yankovsky, E. A., J. A. Lerczak, W. R. Geyer**, Response of the Length and Stratification of the North River Estuary to Changes in Forcing. *AGU Fall Meeting*, San Francisco, CA, 2014.

**Yankovsky, E. A., D. A. Terry, C. C. Knapp**, Plume Structures in the Central Aleutian Basin. *AGU Fall Meeting*, San Francisco, CA, 2013; *Univ. SC Discovery Day*, Columbia, SC, 2014.

## WORKSHOPS

**Machine Learning and Climate Modeling**: Princeton AOS, July 2019.

**Convection in Nature**: Princeton Center for Theoretical Science, Feb. 2018.

**Forum for Arctic Modeling and Observational Synthesis (FAMOS)**: Woods Hole Oceanographic Institution, Oct. 2017.

**Les Houches Summer School on Fundamental Aspects of Turbulent Flows in Climate Dynamics**: Les Houches Physics School, Aug. 2017.

## AWARDS AND HONORS

**2017 National Science Foundation Graduate Research Fellowship**

Joseph R. LeConte Outstanding Senior Award, 2015

Department of Earth, Ocean, and Environment, University of SC

Magellan Scholarship for undergraduate research, 2013

A research grant award from University of SC

Society of Exploration Geophysicists Foundation Scholarship, 2013

Lieber Scholarship, University of SC, 2011

Music Scholarship for violin performance, University of SC, 2011

**National Merit Scholarship, 2011**

## COMPUTER EXPERIENCE

**MIT General Circulation Model (MITgcm)**: experience in performing idealized 2D and 3D non-hydrostatic simulations of Arctic shelf processes.

**GFDL Modular Ocean Model (MOM6)**: experience in performing idealized and regional simulations; model development, mixing parameterization.

**Other**: Python, Jupyter, MATLAB, GitHub, LaTeX.  
Learning Fortran, shell scripting, HTML & CSS.

TEACHING EXPERIENCE	<p><b>Instructor Assistant:</b> Introduction to Ocean Physics for Climate (GEO-MAE 425). Taught by Gabriel Vecchi, Fall 2018.</p> <p><b>Teaching Transcript Program</b> (Princeton McGraw Center): in progress.</p>
DEPARTMENTAL	<p>Planning Committee for the yearly Princeton <b>AOS Program Orientation and Retreat</b> (2018).</p> <p>Served as <b>Student-Faculty Representative</b> for AOS Program (2017-2018).</p> <p>Helped organize <b>AOS journal club on physical oceanography</b> (2017-2019).</p>
OUTREACH	<p><b>New Jersey Ocean Fun Days</b> – volunteer, 2019.</p> <p><b>Young Women's Conference in Science, Technology, Engineering &amp; Mathematics</b> (Princeton Plasma Physics Laboratory) – volunteer, 2018-2019.</p> <p><b>Plainsboro Library</b> – developed youth program “Motion in the Ocean”, 2017.</p> <p><b>Estuary Day, Environment Day</b> (City of Elizabeth, NJ) – presenter, 2017.</p> <p><b>Future City</b> – member of local nonprofit organization aimed at educating communities about environmental issues, working with policy-makers, and developing environmental initiatives, 2016-2018.</p> <p><b>Environmental Protection Agency: Trash Free Waters</b> – attended meetings to discuss pollution issues facing New York and New Jersey waterways, 2017.</p>
LANGUAGES	<p>Fluent in English &amp; Russian. Proficient in Persian, currently studying French. Also studied Spanish and German in high school/college.</p>