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EDUCATION **Scripps Institution of Oceanography, University of California, San Diego**
PhD in Physical Oceanography. GPA: 4.0.
Dissertation title:
The global meridional overturning circulation in an idealized two-basin model
Advisor: Professor Paola Cessi
2011–2018
Oxford University
MPhys, Second Class Upper Division
2007–2011

RESEARCH **Lamont Doherty Earth Observatory**
EXPERIENCE **Postdoctoral Research Fellow**
June 2018–present
Scripps Institution of Oceanography
Graduate Research Assistant
July 2012 - May 2018

PUBLICATIONS **C. S. Jones** and R. P. Abernathey. Modeling tracer distributions in the modern and LGM ocean: circulation change vs. isopycnal mixing. *in prep.*
C. S. Jones and R. P. Abernathey. Isopycnal mixing controls deep ocean ventilation (2019). *Geophysical Research Letters*, 46 doi: 10.1029/2019GL085208
C. S. Jones and P. Cessi. Components of salt transport in the upper branch of the meridional overturning circulation (2018). *J.Phys. Oceanogr.*, 48, 2445–2456 doi: 10.1175/JPO-D-18-0005.1
C. S. Jones and P. Cessi. Size matters: another reason why the Atlantic is saltier than the Pacific (2017), *J.Phys. Oceanogr.*, 47, 2843–2859 doi: 10.1175/JPO-D-17-0075.1
P. Cessi and **C. S. Jones**. Warm-route versus cold-route interbasin exchange in the meridional overturning circulation (2017), *J.Phys. Oceanogr.*, 47,1981–1997 doi: 10.1175/JPO-D-16-0249.1
C. S. Jones and P. Cessi. Interbasin transport of the meridional overturning circulation (2016). *J. Phys. Oceanogr.*, 46, 1157–1169, doi: 10.1175/JPO-D-15-0197.1
C. S. Jones, C. Cenedese, E. P. Chassignet, P. F. Linden and B. R. Sutherland. Gravity current propagation up a valley (2015), *J. Fluid Mech.*, 762, 417–434, doi: 10.1017/jfm.2014.627

- TALKS
- Isopycnal Mixing Controls Deep Ocean Tracer Distributions. Ocean Sciences 2020.
 - Isopycnal Mixing and Ventilation of the Deep Ocean. Conference on Atmospheric and Oceanic Fluid Dynamics 2019.
 - The global meridional overturning circulation in an idealized two-basin model. Lamont-Doherty Earth Observatory. February 2019.
 - The global meridional overturning circulation in an idealized two-basin model. Stony Brook University, January 2019. *Invited*
 - The effects of basin geometry on transport, stratification and salinity in the meridional overturning circulation. Physical Oceanography Dissertation Symposium (PODS), October 2018.
 - The global meridional overturning circulation in an idealized two-basin model. Yale University, September 2018. *Invited*
 - Size matters: another reason why the Atlantic is saltier than the Pacific. Conference on Atmospheric and Oceanic Fluid Dynamics 2017.
- POSTERS
- Size matters: another reason why the Atlantic is saltier than the Pacific. Ocean Sciences Meeting 2018.
 - Interbasin exchange in the meridional overturning circulation: basin width and the warm route versus the cold route. AMOC Science Team Meeting 2017.
 - Interbasin transport of the meridional overturning circulation. Ocean Sciences Meeting 2016.
 - Size Matters: Why is there overturning in the Atlantic but not in the Pacific? Conference on Atmospheric and Oceanic Fluid Dynamics 2015.
 - Gravity current propagation up a valley. Ocean Sciences Meeting 2014.
- FELLOWSHIPS
- Lamont Postdoctoral Fellowship**
Two-year postdoctoral fellowship
June 2018 - present
 - Geophysical Fluid Dynamics Fellowship**
Summer Program at Woods Hole Oceanographic Institution
June - August 2013
- SOFTWARE
- xlayers: A package for transforming model output from depth coordinates into density coordinates. Builds on xarray to provide parallel scalability.

TECHNICAL SKILLS Scientific computer programming in MATLAB, python and FORTRAN. Experienced with git, github and with python packages for handling large geoscience datasets, including xarray, xgcm and xmitgcm. Some experience of cloud computing. Familiar with the MIT general circulation model (including the adjoint model and state estimation capabilities), and with CESM. Proficient with LaTeX, UNIX and Microsoft Office.

TEACHING & MENTORING EXPERIENCE **Lamont-Doherty Earth Observatory Undergraduate Summer Intern Mentor**
I mentored an undergraduate summer intern in a project that examined heat transport in the ECCOv4 data-assimilating ocean model.

**Columbia University
Guest Lecturer**

GU4925 Introduction to Physical Oceanography
I prepared two lectures about analytical models of the circulation and stratification of the global ocean. I gave these lectures to a mixture of undergraduate and graduate students and created notes to appear online.
Fall 2018, repeated Fall 2019

**UCSD
Teaching Assistant**

ESYS 102, The Solid and Fluid Earth
I taught two sections of thirty students every week, graded homework and proctored exams. This course covered a wide variety of Earth systems topics at an upper undergraduate level.
Winter 2013

SIO 30, The Oceans
I taught two sections of thirty students every week. This course covered physical, chemical and biological oceanography at a lower undergraduate level.
Fall 2012

SERVICE & OUTREACH Volunteer, Lamont Doherty Earth Observatory Open House, October 2018 & 2019
Volunteer, SUBMERGE Marine Science Festival, September 2019
Student Member, Atmospheric and Oceanic Fluid Dynamics Committee. American Meteorological Society [February 2014 - February 2018]
Volunteer, National Ocean Sciences Bowl Regional Competition. Scripps Institution of Oceanography, 2013
Reviewer: Journal of Physical Oceanography, Journal of Climate, Geophysical Research Letters, Journal of Advances in Modeling Earth Systems, Proceedings of the National Academy of Sciences