C. Spencer Jones (he/him pronouns) **spencerj@ldeo.columbia.edu**

CONTACT INFORMATION

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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
2011–2018

Oxford University
MPhys, Second Class Upper Division
2007–2011

RESEARCH EXPERIENCE

Lamont Doherty Earth Observatory
Postdoctoral Research Fellow
June 2018–present
Supervisor: Professor Ryan Abernathey

Scripps Institiution of Oceanography
Graduate Research Assistant
July 2012 - May 2018
Supervisor: Professor Paola Cessi

PUBLICATIONS

C. S. Jones and R. P. Abernathey. Isopycnal mixing: where it matters, when it matters, why it matters *in prep.*

C. S. Jones and R. P. Abernathey. Isopycnal mixing controls deep ocean ventilation *In press at GRL.*

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 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

Submitted Grants

Collaborative Research: AMOC mechanism showdown: geographic controls of overturning in a coupled climate model, lead PI
submitted to NSF Physical Oceanography in August 2019

Technical Skills

Scientific computer programming in Matlab, python and FORTRAN. Experienced with git, github and with python packages for handling large geoscience datasets, e.g. xarray, xgcm, 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 Principles Of 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 postgraduate students and created notes to appear online.
Fall 2018

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, SUBMERGE Marine Science Festival, September 2019

Volunteer, Lamont Doherty Earth Observatory Open House, October 2018

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