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

CONTACT INFORMATION

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RESEARCH INTERESTS

Geophysical fluid dynamics

The Lagrangian meridional overturning circulation

Tracer transport by isopycnal and diapycnal mixing

EDUCATION

Scripps Institution of Oceanography, University of California, San Diego
PhD in Physical Oceanography. GPA: 4.0.
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
I study how changes in the strength of isopycnal mixing affect the ventilation of the deep ocean.

Scripps Institiution of Oceanography
Graduate Student
July 2012 - May 2018

Supervisor: Professor Paola Cessi
I studied differences between the Atlantic and Pacific basins using an idealized-geometry ocean-only primitive-equation model, with particular focus on the relationship between salinity and the global overturning circulation.

Oxford University
Research Assistant
July 2011

Supervisors: Professor David Marshall and Doctor David Munday
Analytical work on boundary layer separation

Oxford University
Undergraduate Student
January - March 2011

Supervisors: Professor David Marshall and Doctor David Munday
Final year project: "Physics of boundary layer separation in the ocean". The aim of this project was to study boundary layer separation for flow around a cylinder by performing Helmholtz decomposition on the terms in the momentum equation.

Awards

Lamont Postdoctoral Fellowship
Two-year postdoctoral fellowship
June 2018 - present

Geophysical Fluid Dynamics Fellowship
Summer Program at Woods Hole Oceanographic Institution
June - August 2013

St Peter's College, Oxford
Scholarship for performance in the First Public Examination
June 2008

Publications

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

Posters

Size matters: another reason why the Atlantic is saltier than the Pacific. Ocean Sciences Meeting 2018

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

Talks

The global meridional overturning circulation in an idealized two-basin model. Yale University, September 2018.

Size Matters: Another Reason Why the Atlantic is Saltier than the Pacific. Conference on Atmospheric and Oceanic Fluid Dynamics 2017

Teaching Experience

Columbia University
Guest Lecturer

GU4925 Principles Of Physical Oceanography
I prepared a lecture on Munk's 1966 Abyssal Recipes paper and the circulation of the deep ocean. I gave this lecture 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

Sea-going Experience

Tidal Mixing in Straits Experiment. R/V Revelle [May 2014]

Technical Skills

Scientific computer programming in Matlab, python and FORTRAN. Familiar with the MIT general circulation model (including the adjoint model) and the HYbrid Coordinate Ocean Model (HYCOM). Experienced Windows, Linux and Mac user. Proficient with LaTeX, UNIX, Microsoft Office and OpenOffice.