

SHANTONG SUN

Scripps Institution of Oceanography, UC San Diego, 9500 Gilman Drive, La Jolla, CA 92093
shantong@ucsd.edu, (858)-822-1722

RESEARCH DESCRIPTION

Interests: Large-scale circulation of the ocean, especially the global ocean overturning circulation and its interaction with the atmosphere and cryosphere; Paleoclimate

Methods: Numerical simulations using general circulation models (GCMs); development of idealized conceptual models

EDUCATION

<i>Ph.D. in progress</i> , Physical Oceanography Scripps Institution of Oceanography, UC San Diego Advisor: Ian Eisenman	2013-2019 (expected)
<i>Master of Science</i> , Physical Oceanography Ocean University of China Advisor: Lixin Wu	2011-2013
<i>Bachelor of Science</i> , Marine Science Ocean University of China	2007-2011

PUBLICATIONS

In prep or submitted

S. Sun, I. Eisenman, L. Zanna, and A. L. Stewart : What sets the depth of the Atlantic Meridional Overturning Circulation? *in prep for J. Clim.*

[A new geometrical conceptual model is proposed to connect the AMOC depth to processes in both the Southern Ocean and the North Atlantic]

S. Sun and I. Eisenman: Influence of sea ice motion on the Antarctic sea ice expansion. *in prep*

[The impact of sea ice motion on the Southern Ocean sea ice is examined in a coupled climate model]

Peer-reviewed

- [8] S. Sun, I. Eisenman, and A. L. Stewart, 2018: Does Southern Ocean surface forcing shape the global ocean overturning circulation? *Geophys. Res. Lett.*, 45(5), 2413–2423
- [7] S. Sun and J. Liu, 2017: Sensitivity of the Antarctic Circumpolar Current transport to surface buoyancy conditions in the North Atlantic. *Ocean Modell.*, 118, 118–129
- [6] H. Yang, L. Wu, S. Sun, and Z. Chen, 2017: Role of the South China Sea in Regulating the North Pacific Double-Gyre System. *J. Phys. Oceanogr.*, 47(7), 1617–1635
- [5] H. Yang, L. Wu, S. Sun, and Z. Chen, 2017: Selective Response of the South China Sea Circulation to Summer Monsoon. *J. Phys. Oceanogr.*, 47(7), 1555–1568

- [4] S. Sun, I. Eisenman, and A. L. Stewart, 2016: The influence of southern ocean surface buoyancy forcing on glacial-interglacial changes in the global deep ocean stratification. *Geophys. Res. Lett.*, 43(15), 8124–8132
- [3] H. Yang, L. Wu, S. Sun, and C. Zhaohui, 2015: Low-frequency variability of monsoon-driven circulation with application to the south china sea. *J. Phys. Oceanogr.*, 45(6), 1632–1650
- [2] Z. Chen, L. Wu, B. Qiu, S. Sun, and F. Jia, 2014: Seasonal variation of the South Equatorial Current bifurcation off Madagascar. *J. Phys. Oceanogr.*, 44(2), 618–631
- [1] S. Sun, L. Wu, and B. Qiu, 2013: Response of the inertial recirculation to intensified stratification in a two-layer quasigeostrophic ocean circulation model. *J. Phys. Oceanogr.*, 43(7), 1254–1269

PRESENTATIONS

- [1] AGU Fall Meeting (2015): Influence of the Southern Ocean on the global deep ocean stratification (Talk)
- [2] Southern Ocean Workshop (NCAR; 2017): Does Southern Ocean surface forcing shape the global ocean overturning circulation? (Talk)
- [3] Ocean Science Meeting (2018): Does Southern Ocean surface forcing shape the global ocean overturning circulation? (Poster)
- [4] Seminar at Caltech (2018): What sets the depth of the Atlantic Meridional Overturning Circulation?

TEACHING EXPERIENCE

- [1] Fall, 2016: Teaching assistant for SIOC 210 Physical Oceanography (Instructor: Lynne Talley)
- [2] Fall, 2017: Guest Lecture for SIOC 209 Numerical Modelling of the Climate System (Instructor: Ian Eisenman)