SHANTONG SUN

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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

Ph.D. in progress, Physical Oceanography — 2013-2019 (expected)
Scripps Institution of Oceanography, UC San Diego
Advisor: Ian Eisenman

Master of Science, Physical Oceanography — 2011-2013
Ocean University of China
Advisor: Lixin Wu

Bachelor of Science, Marine Science — 2007-2011
Ocean University of China

PUBLICATIONS

In prep or submitted

S. Sun, I. Eisenman, L. Zanna, and A. L. Stewart. Surface constraints on the depth of the Atlantic Meridional Overturning Circulation: Southern Ocean vs North Atlantic. *submitted*

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?

5. 22nd AOFD (2019): What sets the depth of the Atlantic Meridional Overturning Circulation? (Talk)

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)