

PENGCHENG ZHANG 张鹏程

Scripps Institution of Oceanography, UC San Diego

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Education

Ph.D., Oceanography, Scripps Institution of Oceanography, La Jolla, CA, USA. Sept. 2020 – present

Committee: Shang-Ping Xie (co-chair), Nicholas J. Lutsko (co-chair), Ian Eisenman, Katharine L. Ricke, and Yuko Okumura.

B.S., Atmospheric Science, Peking University, Beijing, China.

Sept. 2016 - Jul. 2020

Thesis: *Dynamics of Coastal Low-Level Jets.*

Advisors: Yongyun Hu and Eli Tziperman.

Publications

Zhang, P., Xie, S.-P., Okumura, Y., and Lutsko, N.J., Why are East Asian monsoon anomalies more robust in post El Nino than post La Nina summers? In preparation.

Zhang, P., Xie, S.-P., Kosaka, Y., and Lutsko, N.J., 2024: Non-ENSO Precursors for Northwestern Pacific Summer Monsoon Variability with Implications for Predictability. *Journal of Climate*, 37(1), 199-212. doi: [10.1175/JCLI-D-23-0169.1](https://doi.org/10.1175/JCLI-D-23-0169.1)

Zhang, P. and Lutsko, N.J., 2022: Seasonal Superrotation in Earth's Troposphere. *Journal of the Atmospheric Sciences*, 79(12), 3297-3314. doi: [10.1175/JAS-D-22-0066.1](https://doi.org/10.1175/JAS-D-22-0066.1)

Selected Conferences

Conference presentations:

4. CLIVAR/TBI Science Meeting, Guangzhou, China and Online (November 2023): Role of Tropical Basin Interaction on East Asian Summer Monsoon: ENSO and Non-ENSO variability.
3. American Geophysical Union (AGU) Fall Meeting, Chicago, IL (December 2022): Non-ENSO precursors for a coherent mode of summer monsoon variability with implications for predictability.
2. California Geophysical Fluid Dynamics (CalGFD) Meeting, Pasadena, CA (August 2022): Seasonal Superrotation in Earth's Troposphere.
1. California Geophysical Fluid Dynamics (CalGFD) Meeting, Online (August 2020): New Insights into the Dynamics of Coastal Low-Level Jets: A Vorticity Perspective.

Conference posters:

5. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA (December 2023): Why are East Asian monsoon anomalies more robust in post El Nino than post La Nina summers?
4. 4th Summer School on Theory, Mechanisms and Hierarchical Modeling of Climate Dynamics: Atlantic Variability and Tropical Basin Interactions at Interannual to Multi-Decadal Time Scales, Trieste, Italy (July - August 2023): Non-ENSO precursors for a coherent mode of summer monsoon variability with implications for predictability.

3. American Geophysical Union (AGU) Fall Meeting, Chicago, IL (December 2022): Seasonal Super-rotation in Earth's Troposphere.
2. 23rd Conference on Atmospheric and Oceanic Fluid Dynamics (AOFD), Breckenridge, CO (June 2022): Seasonal Superrotation in Earth's Troposphere.
1. American Geophysical Union (AGU) Fall Meeting, Online (December 2020): Dynamics of Coastal Low-Level Jets.

Teaching

Winter 2023	Tutor SIO 217B: Atmospheric and Climate Science II
Summer 2022	Instructor Math 7, Math 9 and LaTeX for Math & Computing Workshop
Spring 2022	Teaching Assistant SIO 173: Dynamics of the Atmosphere and Climate

Department Seminars

Autumn 2023	Climate Journal Club at Scripps Institution of Oceanography
Winter 2023	Climate Journal Club at Scripps Institution of Oceanography
Winter 2023	Physical Oceanography Seminar at Scripps Institution of Oceanography
Autumn 2022	Climate Journal Club at Scripps Institution of Oceanography
Autumn 2022	Scripps Student Symposium at Scripps Institution of Oceanography
Spring 2022	Climate Journal Club at Scripps Institution of Oceanography

Selected Awards and Honors

Regents Fellowship, Scripps Institution of Oceanography (32,000 USD), 2020.

PKU Scholar in Physics, Peking University (3,000 CNY), 2020.

Merit Student, Peking University, 2019.

Founder Scholarship, Peking University (5,000 CNY), 2019.

First Prize, **34th Physics Competition for Undergraduates**, China, 2017.

First Prize (Top 100 in China), **32nd Chinese Physics Olympiad, Final**, China, 2015.

First Prize (4th place among >300,000), **32nd Chinese Physics Olympiad, Semi-final**, Shandong Province, 2015.

Professional Activities and Service

Department service:

SIO Graduate Peer Mentor Program: Mentor (2022 - 2023).

SIO Climate Journal Club: Co-organizer (2022 - 2023).

SIO Open House: Student host (2021, 2023).

Field:

Peer review: *Journal of Climate*, *Journal of Geophysical Research: Atmospheres*, *Geophysical Research Letters*.

California Geophysical Fluid Dynamics (CalGFD) Meeting Organizing Committee (2023).

Additional Information

Languages:

Mandarin (native), English (fluent).

Programming/Computer Skills:

Python, NCL, Julia, C/C++, LaTeX, FORTRAN, CESM.