**Ruijian Gou**

PhD student in Physical Oceanography, College of Oceanic and Atmospheric Sciences, Ocean University of China

Supervised by Prof. Lixin Wu

Research interest: climate variabilities across scales in high-resolution models, with an interest in polar regions

**Education**

B.Sc. in Marine Science, Ocean University of China, 2016-2020

CSC-funded undergraduate internship in University of Alberta, 2019.12-2020.03

Host by Prof. Paul G. Myers

Successive postgraduate and doctoral program in Physical Oceanography, Ocean University of China, 2020-2026

Supervised by Prof. Lixin Wu

DAAD-Short-term scholarships for master’s degree students, Alfred Wegener Institute (online), 2022.05-2022.08

Host by Prof. Gerrit Lohmann

Alfred-Wegener-Institute scholarship, Alfred Wegener Institute, 2023.08-2023.10 & 2024.04-2024.06

Host by Prof. Gerrit Lohmann

CSC-funded research visit, Potsdam Institute for Climate Impact Research, 2024.08-

Host by Prof. Stefan Rahmstorf

**SAIL (Subarctic-Arctic Interest League)**

Leader of a research interest group (SAIL), supported by Prof. Lixin Wu and the collaborations, 2020.11-

Finished projects:

Mesoscale circulations in the Labrador Sea with 1/60° ocean simulations and its impact on deep convection

Ongoing projects:

1. Climate impacts from emerging polar small scales (e.g., ocean eddies) in warmer climates

2. Polar marine extremes and its climate and ecological feedbacks

**SAIL-based workgroup: CBL (Climate-Biology League)**

Leader of CBL, initiated from 2023 AWI Science Week – breakout session "Intersecting pathways - biology meets climate"

Study biological linkage and develop climate – biology models

**Papers** (“ “ denotes members of SAIL)

**Gou\*, R.**, Lohmann, G., Cai, W., Knorr, G., & Wu., L. Amplified cold spells of the Southern Ocean under greenhouse warming. *Under Review for One Earth*.

**Gou\*, R.**, Wolf, K., Hoppe, C., Wu, L., & Lohmann G. The changing nature of Arctic marine heatwaves and its potential impacts on the ecosystem in a warming 21st century. *Principally accepted for Nature Climate Change*.

**Gou\*, R.**, Deng, Y., Cui, Y., Shu., Q., Wu, L., & Lohmann G. Underestimated future Arctic Ocean warming due to unresolved marine heatwaves. *In Revision for Nature Communications*.

**Gou, R.**, Lohmann\*, G., & Wu., L. Atlantic Meridional Overturning Circulation decline: Tipping small scales of the North Atlantic ocean circulation under global warming. *Physical Review Letters*, 133, 034201. (Editor's Suggestion, Featured in Physics: https://physics.aps.org/articles/v17/115)*.*

Shu, R., **Gou\*, R.**, Pennelly, C., Deng, Y., Wu, L., Xiao K., Huang Y., & Myers, P. G. Impact from Downwelling Favorable Winds on Eddy Formation in the West Greenland Current. *Minor Revision for Journal of Physical Oceanography.*

**Gou\*, R.**, Wang, Y., Xiao, K., & Wu, L. (2024). A plausible emergence of new convection site in the Arctic Ocean in a warming climate. *Environmental Research Letters*, 19, 031001*.*

Li, P., Chen\*, R., **Gou\*, R.**, Pennelly, C., Luo, Y., & Myers, P. G. (2023). Winter mixed layer restratification induced by vertical eddy buoyancy flux in the Labrador Sea. *Geophysical Research Letter*s, 50, e2023GL103341*.*

**Gou\*, R.**, Li, P., Wiegand, K. N., Pennelly, C., Kieke, D., & Myers, P. G. (2023). Variability of eddy formation off the west Greenland coast from a 1/60° model. *Journal of Physical Oceanography*, 53, 2475-2490*.*

**Gou, R.**, Pennelly, C., & Myers\*, P. G. (2022). The changing behavior of the West Greenland Current System in a very high-resolution model. *Journal of Geophysical Research: Oceans*, 127, e2022JC018404.

**Gou, R.**, Feucher, C., Pennelly, C., & Myers\*, P. G. (2021). Seasonal Cycle of the Coastal West Greenland Current System between Cape Farewell and Cape Desolation From a Very High-resolution Numerical Model. *Journal of Geophysical Research: Oceans*, *126*, e2020JC017017.

**Projects**

1/23 initiators, ERC synergy grant “i2B - Into the Blue” (funding: 12.5 million euros), 2024.11-2030.10

PI, graduate research project funded by Ocean University of China (for PhD student, “Currents and climates in the Arctic Ocean in high-resolution models”, funding: 30,000 RMB), 2024.01-2026.01

PI, graduate research project funded by Ocean University of China (for master student, “High-resolution model study for the Labrador Sea – eddies, boundary currents, and their impact on deep convection”, funding: 10,000 RMB), 2022.01-2022.12

**Grades**

Undergraduate - Weighted-mean Score: 94.18/100, GPA: 3.87/4, Ranking: 1/73

Ranked 1/40 (Physical Oceanography) in the doctoral admission examination

**Awards**

Youth May Fourth Medal (1/17, highest honor from Communist Youth League), awarded by Ocean University of China, 2024

National Scholarship, awarded by Chinese Ministry of Education, 2018 & 2021 & 2022 & 2024

Excellent Student Model and Outstanding Student Scholarship (1/10, highest honor for undergraduates), awarded by Ocean University of China, 2019

**Other Activities**

Journal reviewer for *Geophysical Research Letters, Environmental Research Letters*, *Journal of Geophysical Research: Oceans*

IOP Trusted Reviewer (Top 15%), nominated by IOP Publishing, 2023