

# YOUNGJI JOH

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## RESEARCH INTERESTS

Climate Variability & Change | Ocean-Atmosphere Interactions | Seasonal and Decadal prediction |  
 Extratropical-tropical Interactions | Hydroclimate extremes

## EDUCATION

2015-2020	Georgia Institute of Technology, Atlanta, GA Ph.D. in Earth and Atmospheric Sciences
2010-2012	Hanyang University, Seoul, South Korea M.S. Environmental Marine Sciences
2006-2010	Hanyang University, Ansan, South Korea B.S. Environmental Marine Sciences

## PROFESSIONAL APPOINTMENTS

2023-Present	<b>Associate Research Scholar</b> Princeton University & GFDL/NOAA
2020-2023	<b>Postdoctoral Research Associate</b> Princeton University & GFDL/NOAA (Advisor: Dr. Thomas L. Delworth)
2015-2020	<b>Graduate Research Assistant</b> Georgia Institute of Technology (Advisor: Prof. Emanuele Di Lorenzo)
2012-2015	<b>Junior Research Scientist</b> Korea Institute of Ocean Sciences and Technology, South Korea

## LEADERSHIP ACTIVITIES

2025	A program co-chair for 38th AMS Conference on Climate Variability and Change at the 2025 AMS annual meeting (upcoming)
2024	Session co-chair for “Frontiers in Earth System Modeling” for 37th AMS Conference on Climate Variability and Change
2024	Session co-chair for “Multi-year to decadal variability and predictability” for 37th AMS Conference on Climate Variability and Change

2023-present	NOAA-MOF Joint Project collaboration: Modeling and assessment of ocean, air-sea coupling and marine ecosystem processes in the Northwestern Pacific and their interactions with climate variability and change
2017	Session co-chair for “Climate change and the effects on the ocean” for PICES/ICES Early Career Scientist Conference

## SERVICE

Mar. 2024	Review Panel Member, National Oceanic and Atmospheric Administration
2023-present	Member of AMS Climate Variability and Change Committee
2018-present	Proposal reviewer for National Science Foundation (GEO/AGS/CLD) Journal reviewer for Nature Communications, npj Climate and Atmospheric science, Communications Earth and Environment, Scientific Reports, Journal of Climate, Frontiers for Young Minds, Frontiers in Marine Science, Geophysical Research Letters, Journal of Geophysical Research-Atmosphere/Oceans, Progress in Oceanography, Deep sea Research Part 1,2, Asia-Pacific Journal of Atmospheric Sciences, Journal of Operational Oceanography, NOAA GFDL internal review, National Research Climate Assessment (NCA5) agency review

## PUBLICATIONS

- [9] **Joh**, Y., T. Delworth, A. T. Wittenberg, X. Yang, A. Rosati, N. Johnson, and L. Jia, 2023: The role of upper-ocean variations of the Kuroshio-Oyashio Extension in seasonal-to-decadal air-sea heat flux variability. *npj Climate and Atmospheric Science*, <https://www.nature.com/articles/s41612-022-00285-z>
- [8] Beaudin, E., Di Lorenzo, E., A., Miller, H., Seo, and Y., **Joh** 2022: Impact of Extratropical Northeast Pacific SST on U.S. West Coast Precipitation. *Geophysical Research Letters*, 44, 11, 663-11,671. <https://doi.org/10.1029/2022GL102354>
- [7] **Joh**, Y., T. Delworth, A. T. Wittenberg, W. F. Cooke, A. Rosati, and L. Zhang, 2022: Stronger decadal variability of the Kuroshio Extension under simulated future climate change. *npj Climate and Atmospheric Science*, <https://www.nature.com/articles/s41612-022-00285-z>
- [6] Di Lorenzo, E., T. Xu, Y. Zhao, M. Newman, A. Capotondi, S. Stevenson, D. Amaya, B. Anderson, R. Ding, J. Furtado, Y. **Joh**, G. Liguori, J. Lou, A. J. Miller, G. Navarra, N. Schneider, D. Vimont, S. Wu, H. Zhang, 2022: Modes and Mechanisms of Pacific Decadal-Scale Variability, *Annual Reviews of Marine Science*, <https://doi.org/10.1146/annurev-marine-040422-084555>
- [5] Choi, W., M. Bang, Y. **Joh**, Y-G. Ham, N. Kang, and C. J. Jang, 2022: Characteristics and mechanisms of marine heatwaves in the East Asian marginal seas: Regional and seasonal differences, *Remote Sensing*, <https://www.mdpi.com/2072-4292/14/15/3522>

- [4] **Joh**, Y., T. Delworth, A. T. Wittenberg, X. Yang, F. Zeng, L. Jia, F. Lu, N. Johnson, S. Kapnick, A. Rosati, L. Zhang, C. McHugh, and W. F. Cooke, 2022: Seasonal-to-decadal variability and predictability of the Kuroshio Extension in the GFDL coupled ensemble reanalysis and forecasting system. *Journal of Climate*, <http://doi.org/10.1175/JCLI-D-21-0471.1>
- [3] **Joh**, Y., E. Di Lorenzo, L. Siqueira, and B. P. Kirtman, 2021: Enhanced interaction between Kuroshio Extension and tropical Pacific in a changing climate, *Scientific Reports*, 11, 6247, <https://doi.org/10.1038/s41598-021-85582-y>
- [2] **Joh**, Y., and E. Di Lorenzo, 2019: Interactions between Kuroshio Extension and Central Tropical Pacific lead to preferred decadal timescale oscillations in Pacific, *Scientific Reports*, 9, 13558. <https://doi.org/10.1038/s41598-019-49927-y>
- [1] **Joh**, Y., and E. Di Lorenzo, 2017: Increasing Coupling between NPGO and PDO leads to Prolonged Marine heatwaves in the Northeast Pacific. *Geophysical Research Letters*, 44, 11, 663-11,671. <https://doi.org/10.1002/2017GL075930>

[To be submitted or in preparation]

**Joh**, Y., et al.: On the seasonal variability, predictability, and forecast skill of East/Japan Sea surface temperature events and marine heatwaves.

Jia, L., ... **Joh**, Y., et al.: Seasonal prediction of summer humid heat extremes in the southeastern United States driven by sea surface temperatures, submitted

Lou, J., **Joh**, Y., Delworth, T.: The role of long-term trends and internal variability in altering fire weather conditions in the western United States, submitted

Lee, S., **Joh**, Y., et al.: Impacts of low-salinity water of Changjiang river discharge on marine heatwaves in Jeju.

## INVITED TALKS & SEMINARS

MAR 2024	JAMSTEC, Yokosuka, Japan (upcoming)
MAR 2024	University of Tokyo, Tokyo, Japan (upcoming)
MAR 2024	University of Toyama, Toyama, Japan (upcoming)
FEB 2024	S2S Webinar Series, NOAA virtual lab
DEC 2023	AGU annual meeting, San Francisco, CA, US
OCT 2023	KIOST, Busan, South Korea
OCT 2023	Pukyong National University, Busan, South Korea
NOV 2022	WHOI, MA, US
OCT 2022	George Mason University, VA, US
SEP 2022	POSTECH, Pohang, South Korea
DEC 2021	KIOST, Busan, South Korea
AUG 2021	Hanyang University, Ansan, South Korea
AUG 2021	KIOST, Busan, South Korea

MAR 2020 GFDL, Princeton, NJ, US  
 MAR 2020 University of Miami, Miami, FL, US

## ORAL PRESENTATIONS

2023 EGU annual meeting, Vienna, Austria  
 2023 US-CMS9 Workshop, Princeton, NJ, US  
 2023 OAR-GFDL meeting (internal), NJ, US  
 2022 PICES Annual meeting, Busan, South Korea  
 2022 OAR-GFDL meeting (internal), Princeton, NJ, US  
 2022 EGU annual meeting, Vienna, Austria  
 2022 CIMES review meeting, Princeton, NJ, US  
 2022 CLIVAR Societally-Relevant Multi-Year Climate Predictions workshop, CO, US  
 2022 Ocean Science annual Meeting, virtual  
 2022 GFDL Lunch time seminar, NJ, US  
 2021 Physical Oceanography Dissertation Symposium, NSF&ONR, HI, US  
 2021 AOGS annual meeting, virtual  
 2020 RGMA meeting, virtual  
 2020 Ocean Science annual Meeting, San Diego, CA, US  
 2018 PICES annual meeting, Yokohama, Japan  
 2018 PICES /ICES Early Career Scientist Conference Busan, South Korea  
 2016 PICES annual meeting, San Diego, CA, US  
 2013 PICES annual meeting, Nanaimo, Canada  
 2013 Korean Society of Oceanography Spring Meeting, Jeju, South Korea

## POSTER PRESENTATIONS

2021 International workshop for midlatitude air-sea interaction, virtual  
 2021 WCRP Attribution of multi-annual to decadal changes in climate system workshop, virtual  
 2021 MPOWIR Pattullo Conference, VA, US  
 2019 Atmospheric Convection and Air-Sea Interactions of the Tropical Oceans, CO, US  
 2011 AGU annual meeting, San Francisco, CA

## TEACHING & MENTORING

AUG 2021 Visiting lectures for graduate students, Hanyang University, South Korea  
 : Advanced statistical analysis and Linear Inverse Modeling for climate science  
 JAN 2021 GFDL lecture for interns  
 : Mechanisms and predictability of Pacific climate variability  
 2016-2020 Teaching Assistant, Georgia Institute of Technology, US  
 : Quantitative Techniques, Undergraduate level  
 Advanced Environmental Data Analysis, Graduate level  
 Habitable Planet, Undergraduate level  
 2010-2012 Teaching Assistant, Hanyang University, South Korea

: Coastal Expedition and Laboratory, Undergraduate level  
 Geomagnetism, Graduate level  
 Geological Oceanography and Laboratory, Undergraduate level  
 Marine ship-board training and exercise, Undergraduate level

## **SCHOLARSHIPS**

2015-2020 Georgia Institute of Technology Graduate Research Assistantship  
 2010-2012 Hanyang Graduate Honor Scholarship  
 2006-2010 Hanyang Undergraduate Academic Excellence Scholarship

## **TRAVEL GRANTS**

2024 Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan  
 2023 Korea Institute of Ocean Science and Technology, Busan, South Korea  
 2022 PICES Annual meeting, Busan, South Korea  
 2021 MPOWIR Pattullo Conference, VA, US  
 2021 Physical Oceanography Dissertation Symposium, Kaua island, HI, US  
 2021 Hanyang University, Ansan, South Korea  
 2017 Atmospheric Convection & Air-Sea Interactions over the Tropical Oceans, CLIVAR, US  
 2017 PICES/ICES 3<sup>rd</sup> Early Career Scientist Conference, Busan, South Korea  
 2016 PICES Annual meeting, San Diego, US  
 2016 CESM Tutorial, NCAR's Mesa Lab, CO, US

## **AWARDS & DISTINCTIONS**

2023 Editors citation for excellent in refereeing, Geophysical Research Letters  
 2022 Best Oral Presentation Award by Physical Oceanography & Climate Committee, PICES Annual Meeting, South Korea  
 2020 Thank a teacher certificate, Advanced Environmental Data Analysis, Georgia Tech  
 2019 Thank a teacher certificate, Habitable planet, Georgia Tech  
 2013 Best Oral Presentation Award by Monitor Committee, PICES Annual Meeting, Canada  
 2010 Outstanding Paper Award, Korea Geological Society, South Korea