

YOUNGJI JOH

National Oceanic & Atmospheric Administration/Geophysical Fluid Dynamics Laboratory
Princeton University Forrestal Campus, 201 Forrestal Rd. Princeton, NJ 08540 USA

youngji.joh@noaa.gov

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

2024-Present **Research Physical Scientist (NOAA Federal)**
Geophysical Fluid Dynamics Laboratory/OAR/NOAA
Seasonal-to-Decadal Variability and Predictability Division

2023-2024 **Associate Research Scholar**
Princeton University & GFDL/OAR/NOAA

2020-2023 **Postdoctoral Research Associate**
Princeton University & GFDL/NOAA (Advisor: Dr. Thomas L. Delworth)

2015-2020 **Graduate Research Assistant**
Georgia Institute of Technology (Advisor: Prof. Emanuele Di Lorenzo)

2012-2015 **Junior Research Scientist**
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

2025 Session co-chair for “Frontiers in Earth System Modeling” for 38th AMS Conference on Climate Variability and Change

2024 NOAA-MOF Joint Project collaboration: Ocean Circulation and Northwestern Pacific Climate Variability and Change (Air-Sea Interaction Research)

- 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 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

- 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

- [11] **Joh**, Y., S. Lee, Y. Park., T. L. Delworth, G. Park, L. Jia, W. F. Cooke, C. McHugh, Y. Kim, H. Lim, 2024: Predictability and prediction skill of summertime East/Japan Sea surface temperature events. *npj Climate and Atmospheric Science*, <https://www.nature.com/articles/s41612-024-00754-7>
- [10] Jia. L., T. L. Delworth, X. Yang, W. Cooke, N. C. Johnson, L. Zhang, Y. **Joh**, F. Lu, C. McHugh, 2024: Seasonal predictions of summer compound humid heat extremes in the southeastern United States driven by sea surface temperatures. *npj Climate and Atmospheric Science*, <https://www.nature.com/articles/s41612-024-00723-0>
- [9] **Joh**, Y., T. L. 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. L. 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 revision]

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, in revision

Lou, J., **Joh**, Y., Delworth, T., & Jia, L.: Identifying source of predictability for vapor pressure deficit variability in the southwest United States, submitted

Lee, S., **Joh**, Y., et al.: Contributing Factor of Changjiang Low-Salinity Water Intrusion into South Korea in Summer: Integrated Study of Observations and GFDL-CM4 data, submitted

INVITED TALKS

DEC 2024 Hanyang University, Ansan, South Korea

JUN 2024 Korea-US JPA Ocean Research Panel Workshop, KIOST, Busan, South Korea

JUN 2024 GFDL-KIOST Workshop, Seoul, South Korea
 MAR 2024 JAMSTEC, Yokohama, Japan
 MAR 2024 University of Tokyo, Tokyo, Japan
 MAR 2024 University of Toyama, Toyama, Japan
 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 AGU annual meeting, San Francisco, CA, US
 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

TRAVEL GRANTS & SCHOLARSHIPS

2024 Hanyang University, Ansan, South Korea
 2024 Japan Agency for Marine-Earth Science and Technology, Yokohama, 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
 2020 Geophysical Fluid Dynamics Laboratory, Princeton, NJ, US
 2017 Atmospheric Convection & Air-Sea Interactions over the Tropical Oceans, CLIVAR, US
 2017 PICES/ICES 3rd Early Career Scientist Conference, Busan, South Korea
 2016 PICES Annual meeting, San Diego, CA, US
 2016 CESM Tutorial, NCAR's Mesa Lab, CO, US
 2015-2020 Georgia Institute of Technology Graduate Research Assistantship
 2010-2012 Hanyang Graduate Honor Scholarship
 2006-2010 Hanyang Undergraduate Academic Excellence Scholarship

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

TEACHING & MENTORING

AUG 2021 Visiting lecturer, 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