Updated: 2025. 08. 14

Yong-Yub Kim

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Research interests

- Multiyear-to-decadal Earth system predictability
- Eddy-resolving high-resolution modeling of ocean circulation
- Limitations of Marine biogeochemical predictability

Education

Seoul National University, Seoul, Republic of Korea	Ph.D.	2017. 03 ~ 2022. 08 School of Earth and Environmental Sciences Major: Physical Oceanography (Supervisor: Prof. Yang-Ki Cho)
Seoul National University, Seoul, Republic of Korea	M. S.	2015. 03. - 2017. 02. School of Earth and Environmental Sciences Major: Physical Oceanography (Supervisor: Prof. Yang-Ki Cho)
Inha University, Incheon, Republic of Korea	B. S.	2009. 03. - 2015. 02. Ocean Sciences

Work Experience

Korea Institute of Ocean Science and Technology (KIOST)	10/2012 - 11/2017, Trainee, Numerical modeling and data analysis
Bjerknes Centre for Climate Research (BCCR)	05/2023 ~ 06/2023, Bjerknes Visiting Fellow, Investigation of atmospheric fluxes on variability of phytoplankton
Institute for Basic Science Center for Climate Physics (ICCP)	09/2022 ~ present, Postdoctoral Research Fellow, Earth system predictability evaluation using CESM2

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Teaching Experience

Seoul National University	9/2015 - 12/2015, Coastal ocean dynamics	Teaching Assistant
Seoul National University	3/2022 - 6/2022, Ocean exploration	Teaching Assistant

Fellowships, Awards, and Honors

2013	Academic Excellence Scholarship	*Inha University, Republic of Korea*
2015	Grand prize	*2nd 3-Dimension Scientific Visualization Competition, Korea Institute of Science and Technology Information (KISTI), Republic of Korea*
2015– 2022	Brain Korea 21 scholarship	*Korean Ministry of Education, Republic of Korea*
2021	Korea Hydrographic and Oceanographic Agency (KHOA) Director General's award	*2021 Ocean & Atmosphere Science Interdisciplinary Studies (OASIS) meeting, Republic of Korea*
2021	Korean Society of Oceanography President's award	*2021 JOISS Ocean science big data challenge, Republic of Korea*
2022	Korean Association of Ocean Science and Technology Societies (KAOSTS) President's award	*2022 KAOSTS Joint Conference, Republic of Korea*
2022	Travel financial support award for selected awardees	*Fourth North Pacific Marine Science Organization (PICES) / International Council for the Exploration of the Sea (ICES) Early Career Scientist Conference, Canada*
2023	Bjerknes Visiting Fellow	*Bjerknes Centre for Climate Research, Norway*
2023	Travel grant award for selected awardees	*IUGG 2023 General Assembly, Germany*
2025	Travel grant by Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	*Workshop on Ocean and Atmosphere Simulations (OFES workshop), Japan*

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Projects participated

2016– 2019	*KIMST, MOF, Republic of Korea*	Walleye pollock stock management based on marine information and communication technology,
2016– 2022	*KIMST, MOF, Republic of Korea*	Deep Water Circulation and Material Cycling in the EAST Sea
2017– 2022	*KHOA, MOF, Republic of Korea*	Analysis and Prediction of Sea Level change in Response to Climate Change around Korean peninsula
2022–	*IBS, Republic of Korea*	Assessment of multiyear predictability of the Earth system model (CESM2)

Publications (ORCID: 0000-0002-2149-3284)

a. Published (Accepted)

1. **Kim, Y.–Y.**, Y. H. Kim* and Y.–K. Cho (2018). Role of cold water and beta effect in the formation of the East Korea Warm Current in the East/Japan Sea: A Numerical Experiment. *Ocean Dyn*. 68, 1013-1023. doi: 10.1007/s10236-018-1175-3

2. **Kim, Y.–Y.**, B.-G. Kim, K. Y. Jeong, E. Lee, D.-S. Byun and Y.–K. Cho* (2021) Local sea level rise caused by climate change in the Northwest Pacific marginal seas using dynamical downscaling. *Front. Mar. Sci. 8.* 620570. doi: 10.3389/fmars.2021.620570

3. Y.-J. Tak, Y.-K. Cho*, J. Hwang and **Y.-Y. Kim** (2022) Assessments of nitrate budgets in the Yellow Sea based on a 3D physical-biogeochemical coupled model. *Front. Mar. Sci. 9.* 785377. doi: 10.3389/fmars.2021.785377

4. **Kim, Y.-Y.,** Y.-K. Cho*, Y.-K. Kang, S.-T. Lee, H. K. Jung, C. I. Lee, S. Kim, K.-Y. Jeong and D.-S. Byun (2022) Potential Impact of Late 1980s Climate Change on the Collapse of Walleye Pollock Catch in the Western East/Japan Sea. *Front. Mar. Sci.* 9. 802748. doi: 10.3389/fmars.2022.802748

5. Y.-J. Tak., Y.-K. Cho*, H.-J. Song, S.-H. Chae and **Y.-Y. Kim** (2023) Spatial similarity between the Changjiang diluted water and marine heatwaves in the East China Sea during summer. *The Sea Journal of the Korean Society of Oceanography*, 28(4), 121-132. doi: 10.7850/jkso.2023.28.4.121

6. **Kim, Y.-Y.,** S.-T. Lee, B.-G. Kim, Y.-K. Cho, C. I. Lee, S. Kim and Y.-J. Tak* (2024) Severe reduction in spawning area and larval abundance of walleye pollock under future warming in the western East/Japan Sea. *Environ. Res. Commun.* 6. 031006. doi: 10.1088/2515-7620/ad3267

7. Lee, S.–T., **Y.–Y. Kim***, Y.-J. Tak*, S. Chae and Y.-K. Cho (2025) Seasonal and interannual variations in material transport in the Korea Strait originating from the Taiwan Strait. *Sci. Rep.* 15, 28282. doi: 10.1038/s41598-025-13861-z

8. **Kim, Y.–Y.**, J.–Y. Lee*, Y. Chikamoto*, A. Timmermann, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat, A. Subrahmanian and C. L. E. Franzke (2025). Robust Estimates of Earth System Predictability of the 1st kind using the CESM2 Multiyear Prediction System (CESM2-MP). (accepted, Bulletin of the American Meteorological Society).

https://www.researchgate.net/publication/387675228_Robust_Estimates_of_Earth_System_Predictability_of_the_1st_kind_using_the_CESM2_Multiyear_Prediction_System_CESM2-MP

b. In review (listed by chronological order)

1. Hasan, Nahid A.*, Y. Chikamoto, W Zhang, M J McPhaden, M. F. Stuecker, J.–Y. Lee, **Y.-Y. Kim** and S.-S. Lee (-). Dynamics and Predictability of the 2020–2023 La Niña Initiation through Tropical Inter-Basin Interaction Using CESM2 Hindcast Experiments (Under revision, Journal of Climate)
2. Karwat, A.*, J.–Y. Lee*, C. Franzke, **Y.–Y., Kim**, E. Y. Kwon, R. C. Garrett and S.-S. Lee (-). Multi-year Predictability of Marine Heatwaves in Vulnerable Coral Reef Regions (Under revision, Nature Communications)
3. Lien, J.*, H. Ando, **Y.–Y., Kim**, and T. Tozuka (-). A linear inverse modeling approach to estimating Liang-Kleeman information flow in a cyclostationary process under memoryless and persistent noise (Under revision, Physical Review E)

c. In preparation (listed by submission priority)

1. **Kim, Y.–Y.**, J. Lien*, K. Rodgers, S. Kido and J.–Y. Lee (-). Prediction of Marine Net Primary Productivity Using a Linear Inverse Modeling Approach
2. Hasan, Nahid A.*, Y. Chikamoto, W Zhang, M J McPhaden, M. F. Stuecker, J.–Y. Lee and **Y.-Y. Kim** (-). Stratospheric Pathway of Multi-Year La Niña Impacts on the Western United States
3. **Kim, Y.–Y.***, A. Timmermann, E. Y. Kwon, F. Fransner, I. Bethke, J.–Y. Lee, Y. Chikamoto, S. –S. Lee, D.–W. Kim and S. Sharma (-). Geostrophic circulation anomaly enhances multiyear predictability of marine biogeochemical system
4. Subrahmanian A., J.–Y. Lee*, W. Park, **Y.–Y., Kim** (-). External and Oceanic Processes on the Long-term Predictability of North Atlantic Climate Variability
5. Yun, J.–E., J.–Y. Lee*, **Y.–Y. Kim**, A. Karwat, S.–S. Lee and Y. Chikamoto, (-). Exploring Sources of seasonal to multiyear Predictability of Terrestrial Ecosystem
6. Karwat, A., J.–Y. Lee, **Y.–Y. Kim**, J.–E. Yun, S.–S. Lee (-). Exploring Multi-year Predictability of Terrestrial Heatwaves in Global Hotspot Regions
7. Song, S.-Y., **Y.–Y., Kim***, Y.-J. Tak, E Y Kwon, Y. Chikamoto, J.–Y. Lee and S.-S. Lee (-). Improved representation of the Dissolved Inorganic Carbon variation by assimilated North Pacific subtropical mode water
8. **Kim, Y.–Y.***, I. Bethke, F. Fransner, J.–Y. Lee, and Y. Chikamoto (-). Primary atmospheric fluxes driving marine net primary productivity variation in the global ocean

Presentations

a. Invited talk

1. **Kim, Y.–Y.** (2023). Local Sea-Level Rise Caused by Climate Change in the Northwest Pacific Marginal Seas Using Dynamical Downscaling – Korea Institute of Ocean Science and Technology (KIOST) seminar, Republic of Korea

2. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, I. Bethke, F. Fransner, W. Park, N. Hasan and A. Subrahmanian (2023). A multi-year climate prediction system based on CESM2 – Bjerknes centre for climate reserch (BCCR) seminar, Norway
3. **Kim, Y.–Y.** (2023). Ocean changes around Korean peninsula using dynamical downscaling under future climate scenarios – NIFS seminar, Republic of Korea
4. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, I. Bethke, F. Fransner, W. Park, N. Hasan and A. Subrahmanian (2023). A Multi-year Climate Prediction System based on CESM2 – Ocean Numerical Modeling Seminar in Cheonnam National University, Republic of Korea
5. **Kim, Y.–Y.** (2023)**.** Climate prediction and Ocean – Seminar in Pukyong National University, Republic of Korea
6. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke and F. Fransner (2023). A multi-year climate prediction system based on CESM2 – Seminar in Pukyong National University, Republic of Korea
7. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, I. Bethke, F. Fransner, W. Park, N. Hasan and A. Subrahmanian (2024). A Multi-year Climate Prediction System based on CESM2 – Korea Institute of Ocean Science and Technology (KIOST) Seminar, Republic of Korea
8. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat, A. Subrahmanian and C. L. E. Franzke (2025). Toward a Systematic Estimation of Earth System Predictability using the CESM2 Multiyear Prediction System (CESM2-MP) – Seminar in Pukyong National University, Republic of Korea

b. International conferences/symposiums/seminar

1. **Kim, Y.-Y.**, Y. H. Kim and Y.-K. Cho (2016). Role of the cold water on the formation of the East Korean Warm Current in the East/Japan Sea: A numerical experiment. In AGU Fall Meeting– Poster (San francisco, US)
2. **Kim, Y.-Y.**, Y. H. Kim and Y.-K. Cho (2017). Role of the cold water on the formation of the East Korean Warm Current in the East/Japan Sea: A numerical experiment. In International Workshop on Modeling the Ocean 2017 – Poster (Seoul, Republic of Korea)
3. **Kim, Y.-Y.**, Y. H. Kim and Y.-K. Cho. (2018). Role of the cold water in the formation of the East Korea Warm Current in East/Japan Sea: A numerical experiment in realistic topography. In Ocean Science Meeting 2018– Poster (Portland, US)
4. Jeong, K.-Y., Y.-K. Cho, M. T. Kwak, **Y.–Y. Kim**, E. Lee and D.–S. Byun (2018). Observation and modelling for long term sea-level changes around Korean Peninsula. In EGU General Assembly 2018– Poster (Wien, Austria)
5. Jeong, K.-Y., E. Lee, H-K. Kim, Y.-K. Cho, M. T. Kwak, **Y.–Y. Kim**, E. Lee and D.–S. Byun (2018). Reproducing the sea level in the last 30 years to predict in the Northwest Pacific using a numerical model. In PICES-2018 Anuual Meeting– Poster (Yokohama, Japan)

6. Jeong, K.–Y., E. Lee, H-K. Kim, B. Kang, Y.–K. Cho, M.–T. Kwak and **Y.-Y. Kim** (2019). Sea level change around Korean Peninsula over the last several decades based on observation data and numerical model. In EGU General Assembly 2019– Poster (Wien, Austria)

7. **Kim, Y.-Y.**, Y.–K. Cho, K.–Y. Jeong and E. Lee (2020). Dynamical downscaling to resolve spatial difference of sea level change in the Northwestern Pacific marginal seas. In Ocean Science Meeting 2020– Poster (San diego, US)

8. **Kim, Y.-Y.**, Y.-K. Kang, S.-T. Lee, H. K. Jung, C. I. Lee, S. Kim and Y.-K. Cho (2021). The late 1980s climate regime shift in the spawning and nursery areas of Walleye Pollock (*Gadus Chalcogramma*) in the western East Sea (Japan Sea). In 2021 SNU-Kyushu Joint Symposium – Oral (Virtual)

9. **Kim, Y.-Y.**, B.–G. Kim, K.–Y. Jeong, E. Lee, D.-S. Byun and Y.–K. Cho (2022). Projection of local sea-level rise caused by climate change in the Northwest Pacific marginal seas using dynamical downscaling. In Ocean Science Meeting 2022– Oral (Virtual)

10. **Kim, Y.-Y.**, Y.-K. Cho, Y.-K. Kang, S.-T. Lee, H. K. Jung, C. I. Lee, S. Kim, Jeong, K.–Y. and D.-S. Byun (2022). Potential Impact of Late 1980s Climate Change on the Collapse of Walleye Pollock Catch in the Western East/Japan Sea. In Fourth ICES PICES Early Career Scientist Conference 2022 – Oral (St. Johns, Canada)

11. Kang, Y.-K., Y.-K. Cho, **Y.-Y. Kim**, B.-K. Kim, G.-H. Seo, S.-J. Kwon and H.-J. Oh (2023). Projection of local sea-level rise under CMIP6 scenarios (SSP1-2.6, SSP5-8.5) in the Northwestern Pacific marginal seas using dynamical downscaling. In EGU General Assembly 2023 –Poster (Wien, Austria)

12. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, and N. Hasan (2023). Seasonal-to-multiyear Earth System Predictions with the Community Earth System Model 2. In IUGG 2023 General Assembly– Oral (Berlin, Germany)

13. A. Subrahmanian, Y.-Y. Kim, W. Park and J.-Y. Lee (2023). Modeling North Atlantic Climate Variability: Role of Ocean Data Assimilation. In 4th Summer School on Theory, Mechanisms and Hierarchical Modeling of Climate Dynamics,Workshop – Poster (Trieste, Italy)

14. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke and F. Fransner (2023). A multi-year climate prediction system based on CESM2 In WCRP Open Science Conference 2023 – Poster (Kigali, Rwanda)

15. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke and F. Fransner (2023). A multi-year climate prediction system based on CESM2 In 8th OceanPredict Science Meeting – Poster (Busan, Republic of Korea)

16. Kang, Y.-K., Y.-K. Cho, **Y.-Y. Kim**, B.-K. Kim, G.-H. Seo and H.-J. Oh (2023). Projection of local sea-level rise under CMIP6 scenarios (SSP1-2.6, SSP5-8.5) in the Northwestern Pacific marginal seas using dynamical downscaling. In 2024 Ocean Sciences Meeting –Poster (New Orleans, US)

17. Nahid, H., Y. Chikamoto, M J McPhaden, J.–Y. Lee, **Y.-Y. Kim** and W. Park (2024). Influence of Tropical Basin Interactions on the 2020-23 La Niña. In 2024 Ocean Sciences Meeting – Oral (New Orleans, US)

18. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Subrahmanian and A. Karwat (2024). A multi-year climate

prediction system based on CESM2. In NCAR Earth System Prediction Working Group winter meeting – Oral (Virtual, Boulder, US)

19. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Subrahmanian and A. Karwat (2024). A multi-year climate prediction system based on CESM2. In EGU General Assembly 2024– Oral (Wien, Austria)

20. Karwat, A., J.–Y. Lee, C. Franzke and **Y.-Y. Kim** (2024). Estimating Seasonal to Multi-year Predictability of Statistics of Climate Extremes using the CESM2-based Climate Prediction System. In EGU General Assembly 2024– Poster (Wien, Austria)

21. Lee, J.–Y., **Y.-Y. Kim** and J. Yun (2024). Exploring Sources of Multi-year Predictability of Terrestrial Ecosystem. In EGU General Assembly 2024– Oral (Wien, Austria)

22. **Kim, Y.–Y.**, A. Timmermann, E. Y. Kwon, I. Bethke, F. Fransner, J.–Y. Lee, Y. Chikamoto and S.-S. Lee (2024). Ocean Circulation constrains multi-year predictability of marine biogeochemical system. In Workshop on Climate Prediction and Services over the Atlantic-Arctic region- Oral (Virtual, Bergen, Norway)

23. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat and A. Subrahmanian (2024). A multi-year climate prediction system based on CESM2. In AOGS 2024 21st annual meeting – Oral (Pyeongchang, Republic of Korea)

24. A. Karwat, J.–Y. Lee, C. Franzke and **Y.–Y., Kim** (2024). Estimating Seasonal to Multi-year Predictability of Statistics of Climate Extremes Using the CESM2-based Climate Prediction System. In AOGS 2024 21st annual meeting – Oral (Pyeongchang, Republic of Korea)

25. A. Subrahmanian, J.–Y. Lee, W. Park, **Y.–Y., Kim** (2024). Estimating Contributions of External Forcings and Ocean Processes to the Long-term Predictability of Atlantic Multidecadal Variability. In AOGS 2024 21st annual meeting – Poster (Pyeongchang, Republic of Korea)

26. J.–Y. Lee, **Y.–Y., Kim** and J. Yun (2024). Exploring Sources of Multi-year Predictability of Terrestrial Ecosystem. In AOGS 2024 21st annual meeting – Poster (Pyeongchang, Republic of Korea)

27. **Kim, Y.–Y.**, S.–T. Lee, B.–G. Kim, Y.–K. Cho, C. Lee, S. Kim and Y.–J. Tak (2024). Severe Reduction in Spawning Area and Larval Abundance of Walleye Pollock Under Future Warming in the Western East/Japan Sea. In AOGS 2024 21st annual meeting – Poster (Pyeongchang, Republic of Korea)

28. Nahid, H., Y. Chikamoto, W Zhang, M J McPhaden, M. F. Stuecker, J.–Y. Lee, **Y.-Y. Kim** and S.-S. Lee (2024). Dynamics and Predictability of the 2020–2023 La Niña Initiation through Tropical Inter-Basin Interaction Using CESM2 Hindcast Experiments In the Wyrtki Symposium and ENSO Winter School 2025 – Oral (Honolulu, Hawaii).

29. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat, A. Subrahmanian and C. L. E. Franzke (2025). Robust Estimates of Earth System Predictability of the 1st kind using the CESM2 Multiyear Prediction System (CESM2-MP). In Workshop on Ocean and Atmosphere Simulations (OFES workshop) – Oral (Kanagawa, Japan)

30. Lee, S.–T., **Y.–Y. Kim**, Y.–J. Tak, S. Chae, and Y.–K. Cho (2025). Seasonal and interannual variations in material transport in the Korea Strait originating from the Taiwan Strait. In EGU

General Assembly 2025– Poster (Wien, Austria, planned in April)

31. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat, A. Subrahmanian and C. L. E. Franzke (2025). (-). Robust Estimates of Earth System Predictability of the 1st kind using the CESM2 Multiyear Prediction System (CESM2-MP). In BACO 2025– Oral (Busan, Republic of Korea, planned in July)
32. **Kim, Y.–Y.,** E. Y. Kwon, J. Sharif, Y. Chikamoto, B. Ingo, S.-S. Lee, J.–Y. Lee (2025). Variable oceanic carbon sink driven by climate variability from 1955 to 2020. In BACO 2025 – Oral (Busan, Republic of Korea, planned in July)
33. Subrahmanian A., J.–Y. Lee*, W. Park, **Y.–Y., Kim** (-). External and Oceanic Processes on the Long-term Predictability of North Atlantic Climate Variability. In BACO 2025– Oral (Busan, Republic of Korea, planned in July)
34. Karwat, A., J.–Y. Lee, **Y.–Y. Kim**, J.–E. Yun, S.–S. Lee (2025). Exploring Multi-year Predictability of Terrestrial Heatwaves in Global Hotspot Regions. In AOGS 2025 22nd annual meeting. In BACO 2025– Oral (Busan, Republic of Korea, planned in July)
35. Yun, J.–E., J.–Y. Lee, **Y.–Y. Kim**, A. Karwat, S.–S. Lee and Y. Chikamoto (2025). Exploring Ocean-driven Multi-year Predictability of Terrestrial Ecosystem Components. In AOGS 2025 22nd annual meeting – Oral (Singapore, Singapore, planned in July)
36. Karwat, A., J.–Y. Lee, **Y.–Y. Kim**, J.–E. Yun, S.–S. Lee (2025). Exploring Multi-year Predictability of Terrestrial Heatwaves in Global Hotspot Regions. In AOGS 2025 22nd annual meeting – Oral (Singapore, Singapore, planned in July)

c. Domestic conferences/symposiums/workshops

1. **Kim, Y.-Y.**, Y. H. Kim and Y.-K. Cho (2016). Role of the cold water on the formation of the East Korean Warm Current in the East/Japan Sea: A numerical experiment. In the Korea Ocean Science and Technology Council Joint Conference 2016– Oral
2. **Kim, Y.-Y.**, Y. H. Kim and Y.-K. Cho (2017). Role of the cold water on the formation of the East Korean Warm Current in the East/Japan Sea: A numerical experiment. In the Geomath Winter School 2017 – Oral
3. Cho, Y.-K., M. T. Kwak, **Y.–Y. Kim**, E. Lee and K.–Y. Jeong (2017). 역학적 규모 축소법을 이용한 한반도 주변 해양 기후변화 예측 계획. In the Korean Society of Oceanography Fall meeting 2017– Oral
4. **Kim, Y.–Y.**, Y.–K. Cho, M.–T. Kwak, J. Jung, S. Chae, E. Lee and K.–Y. Jeong (2018). 역학적 규모 축소법을 이용한 고해상도 지역 해양모델의 과거 30년 한반도 주변 해양 기후변화 재현. In the Korean Society of Oceanography Fall meeting 2018– Oral
5. **Kim, Y–Y.**, Y.–K. Cho, K.–J. Han, D.–J. Kim, E. Lee and K.–Y. Jeong (2019). Sea Level Change around Korean Peninsula based on observation data and numerical model. In the Korea Geoscience Union 2nd Annual Meeting– Oral

6. Jeong, K.–Y., E. Lee, D.–S. Byun, Y.–K. Cho, D.–J. Kim, K.–J. Han and **Y.–Y, Kim** (2019). 우리나라 연안 해수면의 지난 수십년 추세와 미래 전망 계획. In the Korean Society of Coastal Disaster Prevention 7th Annual Meeting– Oral

7. **Kim, Y–Y.**, Y.–K. Cho, B.–K. Kim, E. Lee and K.–Y. Jeong (2019). 역학적 규모 축소법을 이용한 한반도 주변 해수면 상승 모의. In the Korean Society of Oceanography Fall meeting 2019– Oral

8. **Kim, Y–Y.**, Y.–K. Cho, Y.-K. Kang and C. I. Lee(2019). 동해 명태 산란장 및 성육장의 환경변화 분석. In the Korean Society of Oceanography Fall meeting 2019– Oral

9. **Kim, Y–Y.**, Y.–K. Cho, Y.-K. Kang, C. I. Lee and S. Kim(2019). Particle tracking experiments of the East Sea walleye Pollock eggs and larvae related to environmental changes of spawning and nursery areas. In Korean Society for Industrial and Applied Mathematics Annual meeting 2019– Oral

10. **Kim, Y–Y.**, Y.–K. Cho, Y.-K. Kang, C. I. Lee and S. Kim(2020). 동해 명태 산란장 및 성육장의 환경변화와 난자치어의 위치 변동 분석. In the Korea Ocean Science and Technology Council Joint Conference 2020 – Oral

11. **Kim, Y.–Y.**, Y.–K. Cho, B.–G. Kim, E. Lee and K.–Y. Jeong (2020). 역학적 규모 축소법을 사용한 CMIP5 기후변화 시나리오에 따른 한반도 주변 해수면 상승 모의. In the Korea Ocean Science and Technology Council Joint Conference 2020 – Oral

12. **Kim, Y.–Y.**, Y.–K. Cho, B.–G. Kim, E. Lee, D.-S. Byun and K.–Y. Jeong (2020). 역학적 규모 축소법을 사용한 CMIP5 기후변화 시나리오(RCP 2.6, RCP 8.5)에 따른 한반도 주변 해수면 상승 모의. In the Korean Society of Oceanography Fall meeting 2020 – Oral

13. **Kim, Y.–Y.**, Y.–K. Cho, B.–G. Kim, E. Lee, D.-S. Byun and K.–Y. Jeong (2021). 역학적 규모 축소법을 사용한 기후변화 시나리오에 따른 한반도 주변 해수면 상승 모의. In the 2021 2nd APCC Climate Prediction Workshop – Poster

14. **Kim, Y–Y.**, Y.–K. Cho, Y.-K. Kang, S.–T. Lee, H. K. Jung, C. I. Lee and S. Kim (2021). 1980년대 말 기후변화에 따른 동해 명태 산란장 및 성육장의 물리환경변화. In the Korea Ocean Science and Technology Council Joint Conference 2021 – Oral

15. **Kim, Y–Y.**, Y.-K. Kang, S.–T. Lee, H. K. Jung, C. I. Lee, S. Kim and Y.–K. Cho (2021). Impact of the late 1980s climate regime shift on the spawning area of Walleye Pollock (*Gadus chalcogramma*) in the western East/Japan Sea. In the 2021 Korean Mathematical Society annual meeting – Oral

16. **Kim, Y–Y.**, Y.-K. Kang, S.–T. Lee, H. K. Jung, C. I. Lee, S. Kim K.-Y. Jeong, D.-S. Byun and Y.–K. Cho (2021). Potential Impact of late 1980s climate change on the collapse of Walleye

Pollock catch in the western East Sea. In 2021 Ocean & Atmosphere Science Interdisciplinary Studies (OASIS) meeting – Oral

17. **Kim, Y.–Y.**, Y.–K. Cho, B.–G. Kim, E. Lee, D.-S. Byun and K.–Y. Jeong (2021). 역학적 규모 축소법을 사용한 CMIP6 SSP 5-8.5 시나리오에 따른 한반도 주변 해수면 상승 모의. In the Korean Society of Oceanography Fall meeting 2021 – Oral

18. Kang, Y. –K., Y. –K. Cho, B. –G. Kim, **Y.–Y. Kim**, G. H. Seo, S.-J. Kwon and H.–J. Oh (2022). 역학적 규모 축소법을 사용한 CMIP6 기후변화 시나리오(SSP1-2.6, SSP5-8.5)에 따른 한반도 주변 해수면 상승 모의. In the Korean Society of Oceanography Fall meeting 2022 – Oral

19. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park and N. Hasan (2023). A multi-year climate prediction system based on CESM2. In the Korean meteorological society Spring Conference 2023 – Oral

20. **Kim, Y.-Y.,** S.-T. Lee, B.-G. Kim, Y.-K. Cho, C. I. Lee, S. Kim and Y.-J. Tak (2024) Severe reduction in spawning area and larval abundance of walleye pollock under future warming in the western East/Japan Sea (2024). In the Korea Ocean Science and Technology Council Joint Conference 2024 – Poster

21. D-H Seong, D.-H. Son, **Kim, Y.-Y.,** V. Guennec and S. Kim (2024) 한반도 주변 한국 남해에서 생활사 초기단계에서의 멸치 확산 분석. In the Korea Ocean Science and Technology Council Joint Conference 2024 – Poster

22. Kang, Y. –K., Y. –K. Cho, B. –G. Kim, **Y.–Y. Kim**, G. H. Seo and K.–Y. Jeong (2024). 역학적 규모 축소법을 사용한 CMIP6 기후변화 시나리오(SSP2-4.5, SSP3-7.0)에 따른 한반도 주변 해수면 상승 모의. In the Korean Society of Oceanography Fall meeting 2024 – Oral

23. D-H Seong, D.-H. Son, **Kim, Y.-Y.** and S. Kim (2024) EOF를 활용한 한국 남해안 멸치 생활사 초기단계의 확산 분석. In the Korean Society of Oceanography Fall meeting 2024 – Poster

24. **Kim, Y.–Y.**, J.–Y. Lee, A. Timmermann, Y. Chikamoto, S.-S. Lee, E. Y. Kwon, W. Park, N. Hasan, I. Bethke, F. Fransner, A. Karwat, A. Subrahmanian and C. L. E. Franzke (2025). (-). Robust Estimates of Earth System Predictability of the 1st kind using the CESM2 Multiyear Prediction System (CESM2-MP). In the Korean meteorological society Spring Conference 2025 – Oral

25. Karwat, A., J.–Y. Lee, **Y.–Y. Kim**, J.–E. Yun, S.–S. Lee (2025). Exploring Multi-year Predictability of Terrestrial Heatwaves in Global Hotspot Regions. In the Korean meteorological society Spring Conference 2025 – Oral

26. Yun, J.–E., J.–Y. Lee, **Y.–Y. Kim**, A. Karwat, S.–S. Lee and Y. Chikamoto (2025). Exploring Ocean-driven Multi-year Predictability of Terrestrial Ecosystem Components. In the Korean

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meteorological society Spring Conference 2025 – Oral

Field Experience

Pohang 4 disposal region in POSCO, Pohang, South Korea	2015. 11. 30. – 2015. 12. 01.	CTD, fluorometer, ADCP
Pohang 4 disposal region in POSCO, Pohang, South Korea	2018. 03. 22. – 2018. 03. 23.	CTD, fluorometer, ADCP
Pohang 4 disposal region in POSCO, Pohang, South Korea	2018. 05. 28. – 2018. 05. 29.	CTD, fluorometer, ADCP
Gwangyang bay, Gwangyang, South Korea	2019. 11. 07. – 2019. 11. 08.	CTD, fluorometer

Technical skills

Data analysis and visualization (MATLAB, Python, Shell scripts, CDO, Ferret, Fortran, C, ...)

Earth System Model: CESM2.1.4

Ocean Circulation Numerical Model: ROMS 3.8**,** MOM 5

Particle tracking Model: LTRANS 2b

Observation equipment: CTD, ADCP, Fluorometer

Data assimilation: Ensemble optimal interpolation (EnOI), bias-adjusted nudging (anomaly assimilation for decadal prediction system)

Additional training

2013 Jul 1- 12	*Korea Institute of Science and Technology Information (KISTI), Republic of Korea*	High Performance Computing Summer School UNIST (Basic course of OpenMP and MPI)
2014 Aug 11- 14	*Korea Institute of Science and Technology Information (KISTI), Republic of Korea*	High Performance Computing Summer School at SNU (Basic course of OpenCL)
2017 Sep 25-29	*PALM group at the Institute of Meteorology and Climatology (IMUK) of Leibniz Universität Hannover, Germany*	An Introduction to the Large-Eddy Simulation Model PALM
2018 Jun 25-30	*Climate and Ocean Varability, Predictability, and change - First Institute Oceanography. (CLIVAR-FIO)*	CLIVAR-FIO Summer School on :"Past, present and Future Sea level changes"
2018	*UNESCO/IOC Regional*	UNESCO/IOC ODC Training course on :

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Jul 2-7	*Training and Research Center on Ocean Dynamics and Climate (UNESCO/IOC-ODC)*	“Ocean Forecast Systems”