Ziqin WANG

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Education

2024.04-2027.03 PhD course of Science in Agriculture in Aquatic Bioscience
The University of Tokyo
Supervisor: Shin-ichi Ito ITO Shin-ichi | The University of Tokyo (u-tokyo.ac.jp)

2021.04-2023.03 Master of Science in Agriculture in Aquatic Bioscience
The University of Tokyo
Supervisor: Shin-ichi Ito ITO Shin-ichi | The University of Tokyo (u-tokyo.ac.jp)

2016.09-2020.06 B. S. in Marine Resources and Environment
The Ocean University of China (OUC; 985 and 211 projects)
Supervisor: Yongjun Tian

Conference (* indicates presenter)

[1] ***Ziqin Wang** and Shin-ichi Ito: Development of a coupling model of bioenergetics and population dynamics model: example of Pacific chub mackerel, Japanese Society of Fisheries Oceanography Fall Meeting, Japan, November 2021.

[2] ***Ziqin Wang**, Shin-ichi Ito, Yabe Itsuka and Chenying Guo: Development of a coupling model of bioenergetics and population dynamics model: example of Pacific chub mackerel, Japan Geoscience Union Meeting (JpGU) 2022, Makuhari MESSE, Chiba, Japan, May 2022.

[3] ***Ziqin Wang**, Shin-ichi Ito, Yabe Itsuka and Chenying Guo: Development of a bioenergetics and population dynamics coupled model: An example of chub mackerel, SPF-PICES, Lisbon, Portugal, November 2022.

[4] ***Ziqin Wang**, Shin-ichi Ito, Yabe Itsuka and Chenying Guo: Development of a bioenergetics and population dynamics coupled model: A case study of chub mackerel (poster), SPF-Annual Meeting, Seattle, US, October 2023.

[5] ***Ziqin Wang**, Yoshimasa Matsumura and Shin-ichi Ito: Evaluation of optimal sampling methods of microplastic using a non-hydrostatic particle tracking model, SPF-Annual Meeting, Seattle, US, October 2023.

[6] ***Ziqin Wang**, Yoshimasa Matsumura and Shin-ichi Ito: Evaluation of optimal sampling methods of microplastic using a non-hydrostatic particle tracking model (poster), Ocean Science Meeting, New Orleans, US, February 2024.

[7] ***Ziqin Wang** and Shin-ichi Ito: Evaluating marine fish migratory strategies and subsequent effects on distribution and ontogenetic process using an individual based model developed for Pacific chub mackerel (*Scomber japonicus*) (oral), PICES-Annual Meeting, Honolulu, US, 26th October–1st November 2024.

[8] ***Ziqin Wang**, Yoshimasa Matsumura and Shin-ichi Ito: Evaluation of optimal sampling methods of microplastic using a non-hydrostatic particle tracking model (oral), XMAS, Xiamen, China, 14–17 January 2025.

[9] ***Ziqin Wang** and Shin-ichi Ito: Response analysis of Pacific chub mackerel (*scomber japonicus*) to environmental variation and population vulnerability analysis (oral), Japan Geoscience Union Meeting (JpGU) 2025, Makuhari MESSE, Chiba, Japan, 25–30 May 2025.

[10] ***Ziqin Wang**, Shin-ichi Ito, Shike Gao, and Chenying Guo: Coupling bioenergetics and population dynamics models to simulate population dynamics of Japanese chub mackerel: Early life history analysis and future applications (oral), 48th Larval Fish Conference, Québec, Canada, 15–19 June 2025. (cancelled, visa issue)

[11] ***Ziqin Wang** and Shin-ichi Ito: Developing a Lagrange model of growth, distribution, and migration of Pacific chub mackerel (*Scomber japonicus*): to explore the effects of early life history on population fluctuations (oral), ICES ASC 2025, Klaipeda, Lithuania, 15–18 September 2025.

[12] ***Ziqin Wang**, Shin-ichi Ito, Shike Gao, and Chenying Guo: Coupling bioenergetics and population dynamics models to simulate population dynamics of Japanese chub mackerel: Early life history analysis and future applications (oral), PICES-Annual Meeting 2025, Yokohama, Japan, 8–14 November 2025.

[13] ***Ziqin Wang** and Shin-ichi Ito: Impacts of Kuroshio Large Meander on Early Life Stages and Recruitment of Chub Mackerel in the Northwestern Pacific (oral), Ocean Science Meeting 2026, Glasgow, Scotland, 22–26 February 2026.

Workshop & Practice

2022/08/08 – 2022/08/10	Early Career Ocean Professionals Conference of Japanese Oceanographic Symposium, Yamagata, Japan
2023/09/04 – 2023/09/06	Macro Coastal Oceanography Summer School, Shonan Village Center, Kanagawa, Japan
2024/08/26 – 2024/08/30	Aasia-Pacific Network's (APN) Proposal Development Training Workshop (PDTW) for Early Career Professionals (ECPs), Suva, Fiji
2024/10/01 – 2024/12/01	Exchanging program (building up a model for Pacific mackerel in California Current System), the University of California, Santa Cruz, Santa Cruz, California, US

Publication

Z. Wang, S. Ito, I. Yabe, and C. Guo, Development of a bioenergetics and population dynamics coupled model: A case study of chub mackerel, *Frontiers in Marine Science*, DOI: 10.3389/fmars.2023.1142899

B. Xie, S. Ito, L. Huang, H. Yu, C. Guo, and **Z. Wang**, Growth patterns and optimum habitat of *Larimichthys crocea* throughout ontogenesis based on a bioenergetics model, *Regional Studies in Marine Science*, 70 (2024): 103386.

Z. Wang, Y. Matsumura, R. Yamashita, and S. Ito, Marine microplastic distribution under Langmuir circulation inferred from a Lagrangian particle tracking model: Optimal sampling method, *Marine Pollution Bulletin*, on review.

Professional

04/2022 – 03/2023	Teaching Assistant (Python Seminar), the University of Tokyo, Japan
04/2022 – 03/2023	Technician Support (Project of microplastics modelling), the University of Tokyo, Japan
04/2023 – 03/2024	Foreigner Researcher (Project of microplastics modelling), the University of Tokyo, Japan
04/2024 – 03/2025	Research Assistant (Project of microplastics modelling), the University of

Tokyo, Japan

Award

2020 Best Bachelor Thesis awarded by OUC

Biography

I am currently pursuing a PhD in Aquatic Bioscience at the University of Tokyo. The main scientific purpose of my PhD study plan is figuring out how do fishery resources fluctuate in the real ocean including their individual growth, migration pattern, and stock dynamics, especially project how will fishery resources response to future climate change and providing suggestions for fishery management policymakers. My research focuses on three major projects related to Pacific chub mackerel in the northwest Pacific Ocean. First, I aim to map their migration and distribution, using a simulation model coded in Fortran. This model will address the lack of existing data and provide insights for other researchers. Second, I will study the prey-predator dynamics, particularly between Japanese anchovy and chub mackerel, to understand the mechanisms behind population changes and regime shifts in the region. Finally, I plan to compare the population dynamics of chub mackerel stocks across global oceans, exploring how climate change impacts these key species within marine ecosystems. By analyzing their ecological roles, I hope to contribute to a deeper understanding of their influence on the global food chain.

Other information

Nationality:	Chinese
Sex:	male
Birthday:	1998–04–17
Hobbies:	Badminton, classical guitar, climbing & Chinese calligraphy
Driving license:	Chinese Driving License (7 years; LHD; C1)
Language:	TOEFL 90 (2019); JLPT N2; Mandarin (Mother tongue)