

# Lynn A. Hirose

219 Sayre Hall  
300 Forrestal Rd, Princeton, NJ 08540  
lynnhirose@princeton.edu

## **EDUCATION**

**The University of Tokyo** (Tokyo, Japan) / Apr 2017 - Mar 2021

*Bachelor of Science, Earth and Planetary Environmental Science*

**The University of Hong Kong** (Hong Kong, China) / Aug 2019 – Jan 2020

*Exchange Program in Faculty of Natural Sciences, Earth Sciences*

**The Australian National University** (Canberra, Australia) / Feb 2020 – Jul 2020

*Exchange Program in Faculty of Natural Sciences, Earth Sciences*

**The University of Tokyo** (Tokyo, Japan) / Apr 2021 – July 2022

*Master's student (Half a year off / Apr 2021 – Aug 2021)*

Department of Earth and Planetary Sciences, Climate System Science

**Princeton University** (New Jersey, US) / Aug 2022 - Present

*Ph.D. candidate (Master's degree awarded in May 2024)*

Atmospheric and Oceanic Sciences (Collaboration program between Princeton University and GFDL)

## **RESEARCH EXPERIENCE**

**The University of Tokyo, Faculty of Earth and Planetary Environmental Science**

*Bachelor's Thesis Research (supervisor: Prof. Ayako Abe-Ouchi)*

- Analyzed the results of past interglacial simulation experiments by MIROC 4m AOVGCM
- Examined the feedbacks related to interactions between ocean, atmosphere, sea ice, ice sheet, and vegetation that contribute to Arctic amplification

**The University of Tokyo, Atmosphere and Ocean Research Institute**

*Master's Research (supervisor: Prof. Ayako Abe-Ouchi, Prof. Masakazu Yoshimori)*

- Further developed the undergraduate research and conducted feedback analysis to quantify the effect of individual feedback on the surface energy budget and resulting temperature change

**Princeton University / Geophysical Fluid Dynamics Laboratory (GFDL)**

*PhD research (supervisor: Prof. V. Ramaswamy, Dr. David Paynter)*

- Analyzing the last 40 years change in clear-sky outgoing longwave radiation from a spectral perspective and diagnosing the contribution of each climate forcing and feedback component

## **CONFERENCES**

- **Japan Geoscience Union Meeting 2021** (Kanagawa, Japan) / 30<sup>th</sup> May-5<sup>th</sup> June, 2021  
Oral Presentation: L. Hirose, A. Abe-Ouchi, W. Chan, “*Comparative Analysis of Interglacial (MIS1, 5e, 11) Climate Responses to Orbital Elements and Internal Feedbacks*”
- **Japan Ocean Science Meeting** (Chiba, Japan) / 13<sup>th</sup>-17<sup>th</sup> September, 2021  
Oral Presentation: L. Hirose, A. Abe-Ouchi, W. Chan, R. O'ishi, M. Yoshimori, “*Comparative*

*Analysis of Interglacial Climate Responses to Orbital Elements and Internal Feedbacks”*

- **Paleosciences Society Annual Meeting** (Tokyo, Japan) / 23<sup>rd</sup> October, 2021  
Oral Presentation: L. Hirose, A. Abe-Ouchi, W. Chan, R. O’ishi, M. Yoshimori, “*Comparative Analysis of Interglacial Climate Responses to Orbital Elements and Internal Feedbacks*”
- **Japan Geoscience Union Meeting 2022** (Chiba, Japan) / 22<sup>nd</sup>-27<sup>th</sup> May, 2022  
Oral Presentation: L. Hirose, A. Abe-Ouchi, W. Chan, R. O’ishi, M. Yoshimori, T. Obase, “*Arctic Amplification through Inter-seasonal Feedback Effect in Past Interglacials*”
- **European Geoscience Union (EGU) General Assembly** (Vienna, Austria) / 23<sup>rd</sup>-27<sup>th</sup> May, 2022  
Oral Presentation: L. Hirose, A. Abe-Ouchi, W. Chan, R. O’ishi, M. Yoshimori, T. Obase, “*Arctic Amplification through Inter-seasonal Feedback Effect in Past Interglacials*”
- **Gordon Research Conference, Radiation and Climate** (Maine, US) / 23<sup>rd</sup>-28<sup>th</sup> July, 2023
- **American Geophysical Union (AGU)** (California, US) / 11<sup>th</sup>-15<sup>th</sup> December, 2023

## **AWARDS AND HONORS**

- **Excellent Research and Presentation Award**  
Paleosciences Society Annual Meeting, 23<sup>rd</sup> October 2021
- **Scholarship for UC Berkeley Summer Session** 1,400USD  
Scholarship for the program participation from the University of Tokyo, Jul - Aug 2018
- **University-wide Student Exchange Program (USTEP)**  
Benefits for students who passed internal screening and partnership university’s selection
- **Tobitate! Study Abroad Initiative** 4,500USD/semester  
Japanese Government-sponsored scholarship for study abroad awarded to selected promising youths, Aug 2019 – Jan 2020
- **AFLSP (Asian Future Leaders Scholarship Program)** 12,500USD/semester  
Scholarship for study abroad awarded to high-caliber students at leading East Asian universities, Aug 2019 – Jan 2020
- **Fung Scholarship** 3,500USD  
Scholarship for study abroad awarded to students chosen on the basis of academic excellence and leadership potential, Aug 2019 – Jan 2020
- **U Tokyo Global Leadership Program**  
Interdisciplinary program for selected students with good academic performance, high English proficiency, and the potential to become global leaders, Jan 2019 – Feb 2020
- **Department Fellowship from University of Michigan**  
Additional fellowship with the offer covering full tuition plus stipend (withdrawn), Mar 2022
- **Toyota Physical and Chemical Research Institute Scholarship** 3,000USD/month  
Scholarship awarded to selected students aiming PhD degree abroad, Aug 2022 – July 2024

## **WORK EXPERIENCE**

- **Mathematics Teacher**

*Tetsuryokukai (Preparatory School for the Univ. Tokyo Entrance Examination), Apr 2017 - May 2020*

- **Overseas Climate Business Research Manager**

*Gaia Vision Inc., June 2021-March 2022*

## **SKILLS**

**Python, UNIX/Linux, Fortran, GrADS, NCL**

**IELTS 7.0 / 9.0**

**TOEFL iBT 96 / 120 (MyBest Score 100 / 120)**

## **ACTIVITIES**

- **UK- Japan Student Conference in Tokyo**

*Conference Member, 2017*

- Topic in 2017: Internationalism, Isolationism, Immigration
- Deepened knowledge and discussion on social issues through many activities such as debates, policy briefs, street interviews, presentations, and literature review

- **UK- Japan Student Conference in London**

*Committee Member, 2018*

- Topic in 2018: Migration and Labour Rights
- Organized a week-long summer program where British and Japanese university students stay together and discuss global social issues with a variety of activities

- **Univ. Tokyo English Speaking Society**

*Vice-President, 2018*

- The largest English community at the University of Tokyo with more than 100 members engaging in English activities of debate, discussion, speech, guide, and drama
- Interacted with other school students through speech, debate, and discussion competitions
- Responsible for the overall management of ESS, recruiting and dealing with new students, communicating with external parties, and coordinating interaction events with alumni
- Received groups of students from the National University Singapore and UC Berkeley, and coordinated interaction events including campus tour, discussion, playing games, and culture sharing sessions

- **Career Talk Events**

- Joined career talk events as one of the panelists for junior and senior high school students to support female students who aspire to pursue STEM fields as one of the less than 10% of female students in the Faculty of Science at the University of Tokyo

- **Article on Study Abroad Experience in U Tokyo's official school newspaper**

*Published on September 13<sup>th</sup>, 2020*

- While studying in Hong Kong, the democratic movement gained momentum and the university campus became a battlefield, which forced me to return to Japan midway through study abroad.
- Changing the destination of my study abroad to Australia National University, the COVID-19 pandemic forced me to come back from Australia to Japan in the middle of study abroad again.
- Taking more classes than others in parallel with my graduation research to fulfill the credit requirement, successfully graduated by earning credits at all three universities
- Learned how to manage the unexpected confusing situations by assessing the options, making decisions that seem optimal under the circumstance, executing, and communicating as needed
- Wrote an article about this experience as a guest writer on U Tokyo's official school newspaper to share my learning from the experiences that everyday life could change suddenly, and everyone could face unpredictable and uncertain situations at any time
- **Cultural Exchange Event**
  - Based on my personal experience as an exchange student in Hong Kong, where I initially felt isolated and stressed in a completely new environment with language and cultural barriers and few international students in the class, planned and organized several cultural exchange events to support international students in Japan
  - Held a series of cooking events at Univ. Tokyo where domestic students and international students got together and cooked their local food from their home countries
- **Workshop Seminars on Climate Change**
  - Organized a series of workshop seminars on climate change in cooperation with a Doctor of environmental studies, a systems scientist, and a university lecturer in Japan
  - Carried out 5 interactive programs dealing with climate change from the perspectives of science and social systems, mainly consisting of discussions among participants with diverse backgrounds ranging from university students to working adults
- **Art Exhibition**
  - Held an art exhibition with university students from different backgrounds, including art, engineering, medicine, and physics, attempting to integrate science and art
  - Used satellite images provided by Axelspace, an aerospace venture company, to express our consciousness of social issues in the form of artworks
  - Created artwork intended to convey the reality of our planet and raise environmental awareness
  - The exhibition was held at a cafe near our university campus, and more than 200 students and professionals visited the exhibition.
- **Interview on my career path**

*Interview article published on the UT-BASE website in 2022*

  - Shared my career path and the reasons behind it to provide an example to high school students and freshman students wondering about their future career.
- **XPLANE facilitator**

- Managing a community aimed at supporting graduate study abroad, organizing information sharing and networking events, writing articles about immigrating preparation and living abroad, and organizing seminars on safety and health care etc.
- **Assistant in U Tokyo-Princeton Collaborative Session in NY/Princeton**
  - Helped out the U Tokyo students meetup and discussion with Dr.Manabe as a PhD student studying Climate Science
  - Gave a talk about my research and student life at Princeton
- **Mentor**
  - Mentoring students who aim to join overseas doctorate program
  - Assisting with the application preparation, providing feedback on overall strategy for application including the content of research statements and general communication
- **Local outreach event**
  - Set up a booth of Atmospheric and Oceanic Sciences with my department peers at the biggest science event “Spring into Science” at Princeton University for upper elementary to middle school students and their families