

## The 3rd Imperial-Tokyo Tech Global Fellows Programme 2023



Imperial-Tokyo Tech Global Fellows Programme 2023, the third doctoral student exchange program between Imperial College London (Imperial) and Tokyo Tech, took place from September 18 to 22 in Tokyo.

This program is a camp-training international exchange program jointly launched in 2018 by Tokyo Tech and Imperial in the UK, designed to develop leadership skills and communication abilities of doctoral students and build a collaborative network between young researchers.

The second program was held in London in 2019, but subsequently had to be suspended for three years due to the COVID-19 pandemic. This year's program focused on three of the 17 Sustainable Development Goals (SDGs) proposed by the United Nations: #6 "Clean Water and Sanitation," #7 "Affordable and Clean Energy," and #14 "Life Below Water." It was held at the National Olympics Memorial National Youth Center and at Tokyo Tech's Ookayama Campus in Tokyo.

A total of 30 doctoral students, 15 each from Tokyo Tech and Imperial, gathered for this five-

day program during which participants deepened their understanding of sustainable water and energy through lectures on the topic, discussions with experts, and tours of related facilities. On the final day, each team proposed a research project that would help the realization of sustainable water and energy. It was a fulfilling five-day program in which participants from different backgrounds discovered the joys and difficulties of working together as a team.

Tokyo Tech prepared its part of the program — Global Camp 1 — through the doctoral program's Humanities and Social Science course. With Vice President for Teaching and Learning Manabu Kanda serving as the project manager, the working group was established in the Education Planning Section of the Office of Education and includes three members of the Institute for Liberal Arts – Professor Takehiro Inohara, Associate Professor Hironao Kaneko, and Associate Professor Yuto Koizumi (who all concurrently teach at the School of Environment and Society) – as well as Specially Appointed Associate Professor (Lecturer) Sasipa Boonyubol of the School of Environment and Society and staff members of the International Student Exchange Division.

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## Day 1: Welcome and Introductions

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Thirty participating students and faculty members from Imperial and Tokyo Institute of Technology gathered at the National Olympics Memorial Youth Center in Tokyo for the start of the program. The participants, who were nervous at first, began to open up as they engaged in icebreaking, and the atmosphere at the venue quickly warmed up. The participants were then divided into five teams of six people each, organized according to the diversity of their fields of expertise and nationalities. Over the next five days, they became friends who, together with their coaches from Imperial and Tokyo Tech, discussed ways to realize sustainable water and energy.

After the icebreaking session, Vice President Manabu Kanda gave a lecture on the role and effects of manmade forests and green spaces on the urban heat island phenomenon, focusing on the Meiji Shrine Forest located near the program site.

In the afternoon, students learned about "Sustainable Water and Energy," the theme of this

year's program. They listened to lectures by six experts in the field, including Professor Tsuyoshi Kinouchi of Tokyo Institute of Technology, who is conducting research on the evaluation and prediction of local water resources through the integration of advanced technologies, and who is at the forefront of research in this field. It was a valuable opportunity to listen to researchers from different fields and absorb multifaceted knowledge about the research being conducted in each field and the challenges they face in their efforts to achieve sustainable water and energy.

Students researched facts about sustainable water and energy, created two types of cards with questions and answers based on the facts, then enjoyed the game invented by Associate Professor Kaneko similar to the card game, "Memory".



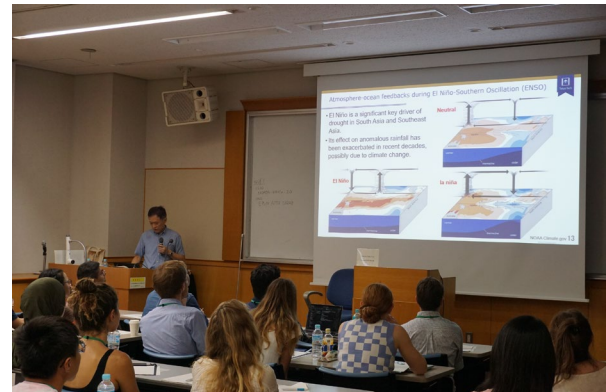
National Olympics Memorial Youth Center, venue for the program



An icebreaking activity using bamboo sticks



Lecture by Professor Kanda



Lecture by Professor Kinouchi



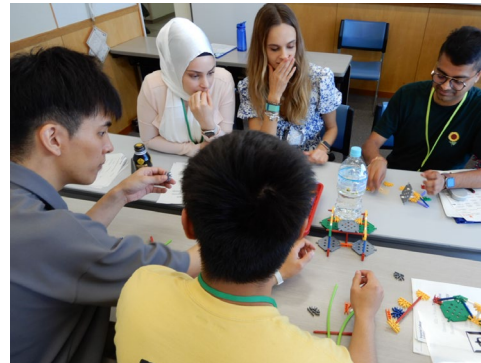
Playing card game to deepen knowledge about sustainable water and energy



Welcome party

## Day 2: Inspiring and Empowering

During the morning session, students played a game that called on their ability to communicate and closely cooperate with their team members as they attempted to solve five tasks. One activity designed by Professor Inohara involved grasping research ethics properly. The teams grappled with the tasks, and the exercise seemed to have improved unity among the teams by the time they completed the activities.



Tackle tasks with the whole team

After lunch, the entire group visited the Kanda River and Loop Route 7 Underground Regulating Reservoir in Nakano Ward, Tokyo. Participants walked through the huge waterway, which was constructed 43 m below the Loop 7 to prevent flood damage caused by river overflows due to typhoons and torrential rains, and experienced firsthand how it works and its importance.





Monitor the movement of  
the regulating reservoir



In front of the tunnel 43 meters

### Day 3: Intersectoral

In the morning, participants chose a sub-theme for their group project and had a series of discussions. In the afternoon, they took part in a Japanese tea ceremony at the Oka-tei in the National Olympics Memorial Youth Center. In the tatami-mat tea room, the participants listened to an instructor explain the origins of the tea ceremony, its tools and manners, and enjoyed weak tea after viewing a hanging scroll with seasonal flowers and the moon as its theme



Experiencing a traditional Japanese tea ceremony

Following the tea ceremony, they listened to a lecture by Takeshi Denda, executive officer and VP of WOTA CORP., a company that develops small-scale decentralized water recycling systems and autonomous water treatment control systems to solve structural water problems around the world. He explained the company's vision and products as well as the projects it is working on around the world. It is said that 40% of the world's population will face water problems in the future. The students asked many questions, exceeding the scheduled time, about the company's efforts to develop new water infrastructure facilities to solve this problem.



Lecture by Mr. Denda, WOTA CORP.



Mr. Denda and Imperial lecturer Seldon

## Day 4: Accelerator Project

While continuing their brainstorming from the previous day, all teams started actual work on their group projects on Day 4. Their task was to channel multiple discussions into a single project as a team. The diversity of the team members produced various opinions, and the discussions became heated among some teams. This made it hard to focus on one topic, but everyone tried their best to listen to their teammates' opinions and contribute.

In the afternoon, the group moved to the Ookayama Campus of Tokyo Tech, where they toured Taki Plaza and the library before making elevator pitches outlining the projects that each team had come up with. They then received questions and comments from other teams — such as "How will you get people in the community involved?" and "What are the expected costs?"— and applied that input to refine their project.



At Tokyo Tech's Ookayama



Making elevator pitch  
before the final presentation

## Day 5: Presenting with Impact

The project presentation, the culmination of the program, was held at Mishima Hall on the Ookayama Campus. The teams divided up the work among themselves and put together a poster for the presentation using only color pens and paper. Imperial lecturer Paul Seldon, Tokyo Tech Vice Presidents Manabu Kanda, and Nobuhiro Hayashi (Vice President for International Affairs) served as judges.



Final presentations by each team



Reading hand written posters by each team

Filled with originality, the presentations revealed the value of the teams' extensive discussions on the realization of sustainable water and energy. After all teams' presentations, the judges announced the winning teams for the Collaboration Award, Creativity Award, and a special award chosen by the staff, and each team was presented with a trophy. All participants also received a certificate of completion for the program.



**Collaboration Award**

(Front Row) Mr. Daanyaal Haydal Khan

(Back Row) Lecturer Seldon, Mr. Antoni Bigata, Ms. Clara Gimeno Jesus, Mr. Takumi Ito  
Ms. Kanokwan Yamsomphong, Ms. Wen Jin, Vice President Kanda and Vice President Hayashi





### **Creativity Award**

Ms. Enkhuur Munkhsuld, Lecturer Seldon, Mr. Muhammad Aljiedi  
Mr. Kota Nakahara, Mr. Kin Tung Michael Ho, Ms. Danai Athina Irakleidi  
Mr. David Büchner, Vice President Kanda and Vice President Hayashi



### **Special Award**

Mr. Takahiro Yamabe, Mr. Yuxuan Liu, Ms. Aynur Atalay, Ms. Maria Luisa Scarpa  
Mr. Yeyang Sun and Mr. Vinayak Gupta

After the awards ceremony, a farewell party was held in the International Lounge of the Earth-Life Science Institute on the Ookayama Campus, attended by President Kazuya Masu, Provost, Executive Vice President for Institute Strategy Isao Sato, and Executive Vice President for Education Junichi Imura. Vice President Kanda presided over the party, which was also attended by Vice President Hayashi and Professor Emeritus Akihiko Tanioka, who gave lectures on the first day of the program, and had a pleasant chat with the students who had completed the five-day program. In the middle of the meeting, they looked back on the 5-day program, looking at the photos compiled on slides, and were surprised at how quickly

time flies, but shared memories with their friends who spent the 5 days together and hoped to see them again.

Students from both universities had deepened relationships through other activities such as going out for dinner and karaoke together in their free time. The program closed with the hope that the network of students established here will lead to further research exchange in the future.

The Tokyo Tech participants are scheduled to stay in Imperial's laboratory for one to three months until March 2024 to conduct field research and study under the guidance of their host faculty members.



Group photo at the Farewell Party



President Masu delivered farewell remarks