

# KENGURO 季刊報 vol.17



3D Ganchar: Produced  
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## Focus on !!

## 12 students were invited from Hambat National University in Korea !!

Our student exchange program with Hambat National University in Korea marked its 6th year this year. We invited 12 undergraduate and graduate students from the university from August 27 to 30, 2018 and hosted a student exchange program through a joint Problem Based Learning project as well as other projects.

### ★ Mini lecture and joint PBL!!

Day 1 started with opening remarks by Dean Funazaki. This was followed by mini lectures by three instructors from Hambat National University and three from Iwate University. After 22 students including ten from Iwate and 12 from Hambat introduced themselves to each other, Hambat students introduced this year's themes for the joint PBL: 1) Applied technology for artificial intelligence, 2) Systems for creating, storing, and saving energy for the future, 3) Power generation, 4) Reduction of oceanic pollution, and 5) Controlling the growth of algae for improving water quality. After that, students were divided into mixed groups of four or five Japanese and Korean students to collect information and engage in discussion.

Day 2 was dedicated to continued joint PBL and an interim debriefing session in the afternoon in which each team introduced rough but diverse ideas of their own. In the following closing ceremony, each of the participants received a certificate of completing the student exchange program at Iwate University. Students continued to engage in discussion even after the Hambat students went back to prepare for final debriefing of the joint PBL that will be held in October when Iwate University students visit Hambat National University.

### ★ Extracurricular activities in Hachimantai !!

Students visited the New Neutralization Treatment Facility of the former Matsuo Mine and the Matsukawa Geothermal Power Plant as part of the extracurricular activities on Day 3. They seemed to have found the geothermal power plant rare and listened to the explanation given by the plant staff with great interest. Students went to the Hachimantai summit between the trips. It was unfortunately rainy so there wasn't any prospect of a beautiful view, thus many of them stayed on the bus during the breaks. It would be great if they could enjoy the stunning view of Hachimantai on a sunny day next time they visit Iwate.



PBL Discussion (left picture). At first, students were struggling communicating in English, but as time went, it seemed they opened up each other gradually. Laughing was all around.

Welcome party on the first day (picture right). Students challenged "Wankosoba" - noodles served continuously. See the bowls stacking up so high.



We went to the past Matsuo Neutralization plant (picture left). Looks like professors are much eager than students.



Participating students and professors from both university.

### Participants' voice



**Mr. Yusuke Kon - Regional and Community Design (Civil and Environment Engineering) M1:** Since we spent times with Korean students all day long for 3 days, I had a great sense of fulfillment. It was a really valuable experience. Korean students were not only cheerful but really good at debating. To me, debating in English is so hard, but I'd like to give an effort to make a good presentation.



**Mr. Takumi Watari - Material Science and Engineering M1:** I spent really meaningful days despite the period was really short. Korean students and we shared the differences and common points in both Korea and Japan throughout the training period. Korean students did have a high English skill. In the next meeting in October, I surely expect myself to get the further achievement.



**Mr. Byeongchan Kim, Information&Communication Engineering B4:** Through this Program, I shared a lot of thoughts with my Japanese friends and discussed the problem. Although they are different in nationality, I felt similar to us. I learned a lot of Japanese culture and became very close to my Japanese friends. They are really kind and funny. It was the most fun to talk with Japanese friends over drinks. This project was very meaningful and happy time. I will never forget.

**Ms. Hyewoon Kim, Mechanical Engineering B4:** I could experience a lot that I have never experienced before. I had time to talk and discuss about our topic with Iwate University students so I could listen their thoughts and ideas. When I looked around Iwate University, I could compare different points with our university and it was so nice to see a lot of good mechanical equipment and research projects during the lab tour. It was also meaningful to visit the power plant that I did not go in Korea.

# Focus on !!

# SAKURA Exchange Program in Science

2018. 7. 20 ~ 7. 27

With support from the Japan Science and Technology Agency's (JST) Japan-Asia Youth Exchange Program in Science (SAKURA Exchange Program in Science), we invited Asian students to Iwate University again this school year. This time, from July 20 (Fri) to 27 (Fri) in 2018, 15 undergraduate and graduate students were invited from the Northwest A&F University and Shandong University of Art & Design in China, the National University of Mongolia, University of the Humanities of Mongolia, the Mongolian University of Science and Technology, the National Kaohsiung Normal University in Taiwan, and the University of Phayao in Thailand. Under the theme of "Experience designing content and physical computing based on media technologies," students participated in a research session and PBL at the Faculty of Science and Engineering labs.

## ★ Day 6: Final presentation!

The final presentation of their research results was held in the morning of the sixth day. Each of the five groups had 25 minutes to show their experiences and assignments at each lab (photo on the bottom left). Various presentations were given including 3D modeling by photogrammetry, experience with 3D printer model making, discussion on the differences in package designs for ramen noodles and curry in each country, bio-sensing technology with a coordinate measuring machine, curve interpolation of the measurement results, and creation of animation using Kinect. It was the final day of the practical training at Iwate University and students received a certificate of completion at a ceremony (photo on the bottom right). Students departed from Morioka, taking a shinkansen to Tokyo after lunch.



## ★ Day 7 and 8: Tour of Tokyo and departure

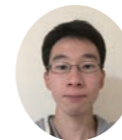
They visited the National Museum of Emerging Science and Innovation on the seventh day. Through different exhibitions on the latest humanoid robots, space, earth, and life, they were able to feel and learn the latest scientific technologies in Japan. The demonstration of ASIMO was particularly interesting to them and they were applauding and filming the scene. After experiencing the Japanese commercial culture in Akihabara and Ameyoko, they moved to Narita at night to stay in a hotel as some of the students had to take early morning flights. Students with afternoon flights visited Naritasan Shinshoji Temple on the eighth day (photo on the right). They took a group photo before departing for their countries in great spirits but said emotional goodbyes.



## Participants' voice

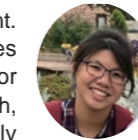
### Mr. Kazuto Yoshikawa, Electrical Engineering and Computer Science B4:

Joining Sakura Science was a really good experience for me. A Mongolian student visited our lab, and I felt his English skill was much better than me. I had a hard time expressing myself in English, but I learned then, body language could be a great help in communication.



### Mr. Masaru Furukawa, Design and Media Technology M2:

I had a chance to communicate with a Mongolian student. We talked about the differences in dietary and cultures of both countries. I was glad when he enjoyed sushi for lunch one day. Since I am not good at speaking English, I was thrilled when I made myself understood. Totally speaking, it became a really great experience for me.



### Ms. Munguntsetseg Enkhduuren, Mongolia, B3:

The program was interesting and fun. The most strangest thing about Japan was the hotel that had no windows in Tokyo. One of my future goals is to learn the master at Iwate University. If you ask me what kind of profession want to learn? I will learn animation. Also, one thing I want to say is thank you for giving opportunity to go to iwate university.

### Ms. Jhang He Yue, Taiwan, M1:

I am very happy to recognize many outstanding students from different countries through the seminar. I could learn about Taiwan and Japan life difference, expand my horizons and increase my international outlook, both in graphic design, craftsmanship, and product packaging. Thank you very much for giving me this opportunity to let me go to Japan and understand the local culture and food.

## ★ Day 1 and 2: From arrival in Morioka to Art & Technology Tohoku 2018

Since the 15 students flew from four different countries, they arrived on different flights from 6 am to 4 pm at Narita Airport. Thus, three doctoral students from Iwate University came to the airport to accompany them to Morioka. On the second day, participants received guidance in the morning and visited the Art & Technology Tohoku 2018, an exhibition of digital contents hosted by the Society for Art and Science - Tohoku Section at the Design and Media Technology Collaboration Studio, Faculty of Science and Engineering, Iwate University (see the photo on the right). The exhibition received 86 entries among which 24 were demonstrated at the venue. The demonstrated works featured interactive content and the guest students listened to the descriptions with great interest. As they are mostly from the media and design backgrounds, we look forward to seeing their works if they have a chance to come to Morioka next year.



## ★ Day 3 to 5: Morioka city tour, PBL at labs

On the third day, they visited Morioka Zoological Park as part of the Morioka city tour. It was the first zoo for Mongolian students and they took many pictures. Then they went to a large shopping mall to enjoy shopping. Traditional Japanese kimono as well as Nambu cast ironware and other handicrafts from Iwate particularly caught their attention. The city tour was a great opportunity for all students from different countries to enjoy each other's company.

On the fourth day, international doctoral students at Iwate University introduced the university from their perspective in the morning and Professor Konno from the Computer, Intelligence and Media Technology Course of the Department of Systems Innovation Engineering gave a presentation on his research, which was a fusion of archaeology and media fields. He described the algorithm on 3D jigsaw for building stone artifacts from a 3D coordinate point cloud data obtained by measuring a stone tool. Participants joined different labs to share their research work between the foreign students and Iwate University students and engaged in PBL. Continuing from the afternoon of the fourth day, Day 5 was dedicated to assignments at each lab and preparation for the presentation on the following day. At dinner, participants enjoyed barbecue meat and reimen noodles, one of the three great noodles of Morioka, and exchanged information with two instructors.



In the bus. Going to Morioka Zoological Park. Looking so fun.



The welcome party on the fourth night. Students became closer to each other then.

# ★ International internship from King Mongkut's University of Technology in Thailand !!

The Faculty of Science and Engineering hosted four international interns from King Mongkut's University of Technology Thonburi and Ladkrabang that Iwate University signed an academic exchange agreement with. The international internship at the Faculty of Science and Engineering features a unique program that allows research work at a lab as well as training at a company. This year, the lab research work was held from June 3rd to 15th and the company training from June 18th to July 27th. Interns, Nawarat Choengkhaio and Narikorn Phitagragsakul shared their experiences with us.

## ★ Ms. Nawarat Choengkhaio (KMUT Thonburi)

Nawarat Chongkhao engaged in a research activity at the lab of Yoshihiro Hagihara from the Computer, Intelligence and Media Technology Course of the Department of Systems Innovation Engineering. Hagihara's research focuses on motion recognition using wearable motion capture. Nawarat Chongkhao worked on research to understand how humans move based on the angles of joints and make the movement close to ideal movement obtained through deep learning. Nawarat also received training on the program for controlling a sequencer for a processed food metal detector at the Technology and Development Division of Nikka Densok Limited.

## ★ Mr. Narikorn Phitagragsakul (KMUT Ladkrabang)

Narikorn Phitagragsakul engaged in a research activity at the lab of Masahiro Daibo from the Electrical, Electronic, and Communication Engineering Course of the Department of Systems Innovation Engineering. As part of the research on femtosecond laser processing at the Daibo lab, Narikorn worked on polycarbonate internal processing and analyzing the surfaces. Narikorn received training at the R&D Center of Sumida Power Technology Co., Ltd. and engaged in practical training of designing coil and characteristic evaluation, 3D modeling, and prototyping using 3D printers.



Photo taken after certificate ceremony

From left to right: Prof. Daibo, Prof. Kin, Ms. Nantana Rungsawasdisap (Iwate Univ. Student), Mr. Saran Chanchaipattana, Ms. Nawarat Choengkhaio, Dean of Faculty, Funazaki, Mr. Narikorn Phitagragsakul, Ms. Prinpapar Pichetpakornkul, Prof. Hagiwara

## Participants' voice

### Ms. Nawarat Choengkhaio

First impression of this program is environment of Japan because it's very natural, good weather and good traffic. In my opinion they made me want to wake up for work every morning. Part of resident both are very comfortable and clean. In my workspace, my supervisor supported me a notebook, table, machine demo and recommendation. I think I love to do my job that I got. Something is new thing, I had to take a long time for studying but it's new finding too which make me know more knowledge and a kind of work that I want to do in the future. Something is old lessons that I used to study. I'm glad about I can apply my knowledge to do them, these works make me understand clearly about my job and what kind of knowledge that is important which I have to find more knowledge.

### Mr. Narikorn Phitagragsakul

My life in this laboratory is really good. Prof. Daibo, he is very good teacher and very kind. I have learned about electrical, electronics, optics and many things from him. He teach me not only knowledge but he also helped me about how to live in Japan. People in the laboratory is pretty well when I need some help they always helped me. So, this laboratory makes me feel comforted. I have been to Nagano Prefecture around two weeks for intern in Sumida Company. This is a very good company, I have learned Japanese work style and make new friends in the company. More than technology and knowledge I have seen in my internship, I also learned about Japanese culture that is the best thing I have learned. Japan has many old and beautiful culture. I'm so in love it. Morioka city is a pretty good city. You can see the diversity in this city. I have learned many things in this internship such as technology, knowledge, Japanese culture and also make new friends. Everything I have learned can make me better in the future. In the future, I would like to come back to Japan again, so if I have a chance I don't want to miss it.

## Bulletin Board

### ★ The short term internship program to University of Saskatchewan, Canada is coming up !

Three graduate students are going to be sent to Canada. They are going to visit Canadian Companies and cultural facilities in addition to the activities in the lab there. Their special experience in Canada will be introduced on the next KENGURO Quarterly.

### ★ International internship program to Thailand !

From 24th August ~ 15th September for 3 weeks, 8 students from our faculty joined the internship program in King Mongkut's University of Technology Thonburi (KMUTT) and King Mongkut's Institute of Technology Ladkrabang (KMITL) respectively. Moreover, 2 of them had the practical training at Furukawa Fitel Thailand, and other 2 students went to Sumida Electric (Thailand) Co. Ltd. We will pick up this topic on the next KENGURO Quarterly too.

## The editor's notes

As many participating Japanese students mentioned, those invited students from abroad take positive actions in terms of discussion, communication, or even lab activities. We hope that our students will learn the positive attitude from those invited students.

### Editor :

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