

英文での海外研修レポートです。どれだけ読めますか？ あなたの英語力は？
(次回、日本語版を配布します)

A Study Trip in the USA December 8th~14th, 2019

Member

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Yosemite National Park

Yosemite National Park was the first place to visit during our training trip, and we spent the longest time here in our trip. We could see the Giant Sequoia and many kinds of wild life there. Yosemite National Park, including monolithic named El Capitan and Half-Dome, and Bridal-Veil fall which has the tallest head in the North America, is located in the south of Sierra Nevada. We could see almost all of these ice terrains from the Tunnel View. In the US, December is the time dry season switches to rainy season. It was not good weather before and during our trip, but fortunately the day we visited Yosemite was sunny. We were guided mainly falls and Half-Dome by a park guide, finding wildlife and listening to what happened in the past.



There are so many kinds of mammals in Yosemite. Especially, there are more Squirrels than in Japan. But we could observe Western Gray Squirrel only, because almost all squirrels are



not to be active in winter. Still, we were surprised to see wild squirrels nearby. Also, we encountered Coyote hunting. Coyotes hunt mice, rat and so on. In winter, Coyotes search them only through little sounds and smell. If they find prey, they jump and pierce their head into snow to get their prey.

Besides, we observed Steller's Jay which is beautiful blue bird, and Pileated Wood pecker, which is the largest wood pecker in Yosemite. It was only one day to visit, but we will never forget this experience, observing nature much different from Japan.

KIOXIA

We visited KIOXIA, which was Toshiba Memory. KIOXIA was a corporation which treats flash memory-one of storage media. There are many branches on production or sales and cooperation companies around the world.

This time, we listened lectures by 3 people one of whom was a Japanese. Through these lectures, we could know how convenient flash memories which had a lot of capacity (1ZB=10¹²GB) were and that SSD was more efficient than HDD on battery, weight, and speed of importing. In the future, it is possible flash memories become much smaller than now. It is expected to be used for small medical goods such as gastroscopes and we are sure that there is a possibility of being made use of in various ways.

Also, not only Japanese, but also people from all over the world are working for KIOXIA, and work style is so different from Japan. In the office, personal space was quite large and everyone use this space as they like. Working hours are not set and workers can go home if they want. We felt there is a good environment where they can work freely and individually. On the other hand, we can see the strict performance-based system, like they must finish the assignment in a year.

Intel Museum

The Intel Museum is a museum in Santaclara that exhibits a wide range of information on semiconductor technology, as well as how to make microprocessors and their history.

Originally, Intel was started in the early 1980s to document its history as an Intel internal project. It opened to the public in 1992, tripled in 1999, and added a store.

Today, we have learned very well how Intel, which is leading the global semiconductor market, has developed technology and how to make semiconductors in a visually easy-to-understand manner.



SLAC National Accelerator Laboratory

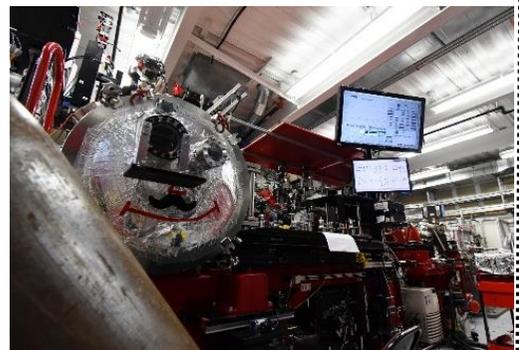
Accelerator Laboratory is the facility jointly operated by Stanford University and the United States, where researchers from around the world gather to conduct the latest research using accelerators. Research extends over a wide range of disciplines, not just physics. Until now, four studies created here have won the Nobel Prize.

Among the many laboratories in the site, we visited the sites of biopolymer, analysis, astrophysics, and particle physics.

The astrophysics lab was building a giant telescope with 180 CCD sensors. After completion, it seems to be the world's largest telescope beyond the Japanese telescope Subaru.

In the study of biopolymer analysis, X-rays emitted from the accelerator hit against the protein, and the structure of the protein was analyzed based on its pattern.

It was very interesting that the accelerator was used in all sorts of research, from large-scale things such as the universe to tiny things like elementary particles.



Academy of science

The Academy of Science is a place like a museum, aquarium, and zoo. We participated in a VIP tour and were guided by staff. According to the staff, various animal carcasses are buried on the rooftop of the building, and microorganisms living there break down them. In addition, I was able to enter the backyard, which I would not normally be able to enter, and I was able to see various things such as stuffed animals, insect specimen, fish soaked in alcohol. And at the end of the tour we could see a special room with very expensive ores. All of them were precious. After the tour, we had free time and we were able to see a lot of things. There was enough time and I was able to enjoy it.



AGU (American Geophysical Union)

The AGU is the national meeting to which researchers all around the world came. The meeting was held for a week, and researchers presented their poster sessions about the Earth and the Universe.

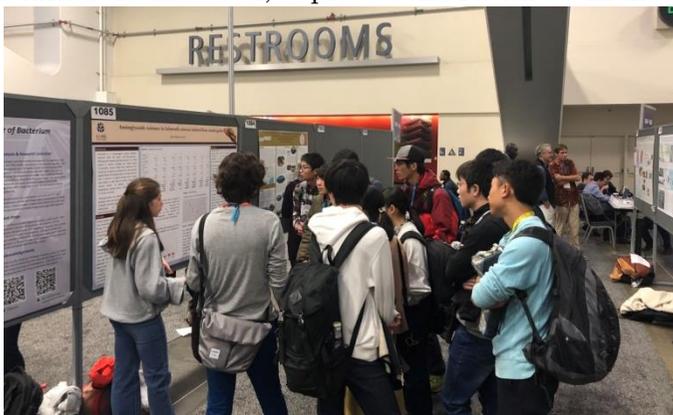
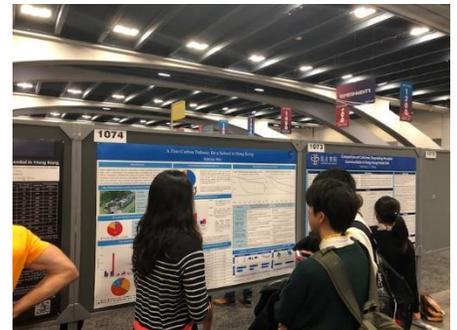
We could take part in it in the fourth day of our trip, and listened to presenters; from primary school students to professors.

First of all, we visited the students' booth. The theme of the primary student's research I heard was the wonder within our life. For instance, why the grasses in the baseball ground which you plug up a hole cannot grow. Also, high school students' research was similar to our study in my school.

On the other hand, the adults' researches there were the world level. For example, "What the conditions are necessary for making the artificial river around the stope for mining a mineral in Australia". They examined the vegetational cover and the roughness in the riverbed by using UAV. Additionally, to conserve the mineral, other researcher studied the composition of the water all around the world since water has important data for making the minerals. However, to protect the resources in the world, just the water ingredients data

is not enough. Since we also need the science technology and local people's consciousness to protect the resources, they will research about that.

I found this meeting AGU was good opportunity for researchers to know each other around the world and then would cooperate together. So I think AGU has a great roll in Science World.



De Anza Highschool

There are 1329 students in De Anza High School. It was built in 1955.

We made some presentations. At the presentation of Yashiro High School, we gave students “karinto” which is prize of class match. The students seemed to be interested. They enjoyed presentation of Japanese anime and manga. They have known a about a lot of characters. We found that Japanese anime and manga are more known than we had expected.



In my school tour, we surprised at the difference of scale between Japan and the USA. For example, students of different ages were studying the same class. For another thing, students are allowed to eat snacks during class. It is never forgiven in Japan, but it is common in the USA. We came to realize the difference again.



During free time, we had students at De Anza High School use chopsticks. We asked them to move soybeans from one dish to another, but I was surprised that everyone could use chopsticks than I thought. I felt a different culture from Japan and it was a good experience. Also, I learned that it was important to try to communicate even if I couldn't understand the language.

UC Berkeley

UC Berkeley has the longest history of 10 campus in California University. Maybe you think this famous university is famous for only study, but UC Berkeley is known to not only study but also volunteer and sports. In fact, students here won many Olympic medals.

We learned about environment relation to water by professor Kondolf. He is the world's expert on researching dams so we heard about water quality, aquatic organism, relation between water and forests and so on. In his lecture, we got interested in global warming.

These days we often hear a global warming graph which shows that average temperature is rising year by year. This graph is generally rising but it is a jagged line. What makes it jagged is related to glaciers. If glaciers increase, forests will decrease. Forests change carbon dioxide into oxygen and the temperature becomes down. Therefore, glaciers have a lot to do with global warming. We found that knowledge taught in geography class and knowledge taught in America are linked together, and we felt fun of learning.

We couldn't completely understand his lecture because it was of course in English. However, we already have basic knowledge about this theme so that we could take a lecture with interests all the time.

