Findings through JUACEP

Name: Yoshiyuki Tange
Affiliation at home country: Department of Mechanical System Engineering,
Graduate School of Engineering, Nagoya University
Participated program: Short course 2017
Research theme: Design of micro-device to implement in *Micro-Piercing Method*
Advisor at the visiting university: Prof. Katsuo Kurabayashi
Affiliation at visiting university: Mechanical Engineering, Univ. of Michigan

My stay in Ann Arbor was for two months, but I had a lot of experiences through JUACEP program. I lived in the house with one family and a UM student. The daughter chatted with me in English every day. It helped me to build up my English speaking and hearing ability. The mother sometimes asked me how to cook Japanese dishes. I showed her cooking “Nikuzyaga” and told her that it is said a woman who can cook “Nikuzyaga” can be married in Japan. The other day, she told me that it is said the middle child is often cared by nobody in U.S. I think there are a lot of cultures you cannot know without actually staying and talking. I was worried about living in an unknown person’s house before staying but I had good opportunity to communicate with people having different cultures.

The lab members were also friendly and kindness. A Ph.D. student always advised me about my research. It was surprised for me that Ph.D. students are diligently proceeding two or three projects and all projects were innovative. I would like to follow their attitudes for researching and working in Japan.

Ann Arbor is beautiful and safety city. You can do kayaking, running and cycling in the city. A lab member took me Huron River and we enjoyed kayaking. It was first time but I felt great nature. There were many runners and running shops in Ann Arbor, so I bought new running shoes and did running around my house every day.

Findings through JUACEP

Name: Hiroki Fujiwara
Affiliation at home country: Aerospace Engineering, Nagoya University
Participated program: Medium course: August 2017-January 2018
Research theme: Demonstration of Digital In-Line Holography for Primary breakup of Water Column
Advisor at the visiting university: Prof. Mirko Gamba
Affiliation at visiting university: Department of Aerospace Engineering, University of Michigan

Academic life and findings

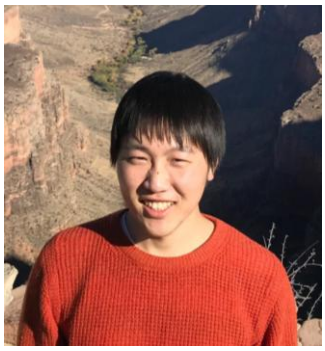
Research through JUACEP has offered me a chance to broaden my scientific knowledge, and understand some differences in research culture. My research topic in Michigan was to investigate similar phenomenon that I have worked in Nagoya, by different technique. This required me a whole new set of knowledges, and for the first several weeks, I had hard time learning new concepts in English from textbooks and I felt like I wasn't making any progress. When I started doing experiments, however, I realized having fundamental knowledge is crucial when deciding experiment plans. Furthermore, I learned many lessons from professor and Ph.D. students, such as to have clear understanding and confidence of every steps of experiments, know what results I expect to get before experiments, and so on. Every lessons I learned here is meaningful and would definitely change the way I tackle challenges on my research in the future.

Having worked and talked with many Ph.D. students in the U.S., I realized that although research is always tough, they are satisfied with their decision of pursuing Ph.D. and they were fully committing to research. From what I have learned, this is because American society has systems of utilizing their talent in the real world. I also realized that many companies come to the university to hire students, and students were always asked to think about the impact of their research to the society. What I also learned is that master programs in the U.S. are more focused on the course work, and students don't have chance to do research. Being able to do research as a master student in the U.S. was thanks to this JUACEP program, and I also thought that I should take advantage of being able to do research in Japan as a master student.

Daily life and findings

JUACEP wasn't just all about research, but was a great opportunity to experience American culture and having fun with new friends. I celebrated Thanks Giving Day, Christmas with delicious food, went to football game and surprised by their school pride, traveled around the U.S., and more. I even enjoyed having lunch with lab mates every day, and shared many ideas and thoughts. What I liked most about American life was the diversity of people and their ideas. In Japan, I felt the pressure of having to have similar ideas with other people. In the U.S., however, people shared the idea that it is natural to have different ideas with others, and made conversation to understand more about others' ideas. After understanding this, I learned the importance of expressing my own idea, in my own words. People were kind enough to understand my point even with my poor English.

Findings through JUACEP



Name: Makoto Takeuchi
Affiliation at home country: Micro-Nano Mechanical Science and Engineering, Nagoya University
Participated program: Medium course 2017

Research theme: Thin alumina films via colloidal processing of flame made nanopowders
Advisor at the visiting university: Prof. Richard M Laine
Affiliation at visiting university: Materials Science and Engineering, University of Michigan

Firstly, I would like to express my gratitude to Prof. Richard M. Laine and everyone involved in this program for providing me with such a precious opportunity. It has been the best thing I've ever done in my life, and I'll never forget what I have learned through the life in the US.

Studying at the University of Michigan has taught me how to survive & thrive in any new environment.

Having done a couple months' preparation, I arrived at Ann Arbor, Michigan in August, 2017, thinking how good of a time I would have for the next 6 months.

However, the life in the US, at first, was not as easy as I had expected it to be. Since my research field was originally in mechanical engineering, I went through hard times involving myself in a completely new field. In addition, I had to overcome the language barrier (even ordering foods at fast food restaurant used to be challenging for me). However, thanks to my professor, lab-mates, friends outside of school, etc. (can't list all of them), I managed to get involved in the research life and/or the life in the US somehow.

Along with the research at the University of Michigan, I've enjoyed my life there. I can't even remember everything that has happened, such as traveling around several cities in the US (Los Angeles, Grand Canyon, Miami, D.C. etc.), watching football games (in the US, football is the most popular sport), which was really exciting, or just hanging out with friends. I especially liked visiting Los Angeles during thanksgiving break. It looked completely different from Ann Arbor in terms of race, culture, etc., which again made me realized that I had been living in my own little world.

Through my 6 month of experience in the US, what I learned the most is that in any situation, it is to take action and to have everyone involved rather than to hesitate alone.

Thanks for the great experience of a lifetime!

Greatest experience to change my mind

Name: Taro Mizutani
Affiliation at home country: Mechanical Engineering, NU
Participated program: Medium course 201/8/8 ~2018/1/29

Research theme: Analysis of assembly line with learning effects
Advisor at the visiting university: Prof. Theodor, Prof. Hu
Affiliation at visiting university: Mechanical Engineering, U of M

It was my first visit abroad, so I didn't everything about US before this program. As soon as arrived at US, I was ripped off by using extremely expensive taxi. I was also surprised with high price of food and drink in restaurants and I was very worrying whether I can be alive here by myself. According to those I knew that I couldn't totally understand English people are speaking and my English is hard for foreigners to catch. But for those people like me Ann Arbor is good place to visit or live because there are many kind people here. For instance, almost all people answer to me kindly when I asked something, or it is general to keep door open for next person here. I was always helped by someone kind and thereby I could finish this program.

Talking about research, I can decide my research topic as discuss with my professor. Professor was thinking about my future work at company and what you want to know thoroughly and found very suitable topic for me. Since the topic is very interesting for me, I could research eagerly and my feeling was fulfilled with motivation to develop this topic. I could meet with professor every week and have one on one discussion for long time. It helped me to improve and develop my research. The difference with way to research in Japan and US is for me that I could do as I want to do in US. It might be because I am exchange student, though. Since U of M is one of the good universities in the world, students or laboratory members were smart and helped me a lot of times.

Besides research, there are many opportunities to meet new people I don't know here. I went to many events and could make international friends. I rarely have chance to talk with foreigners, so it was very stimulating for me and could know different way to think for many things. Though there is almost no place to visit in Ann Arbor, most of people living here are students. It helps us to get to know easily and we would be best friends.

Lastly, I would say it was greatest experience for me in my life. If I have chance to experience like this program, I will apply it positively.

Findings through JUACEP

Name: Makoto Terada
Micro Nano Mechanical and Science Engineering, Nagoya University
Participated program: Medium course 2017

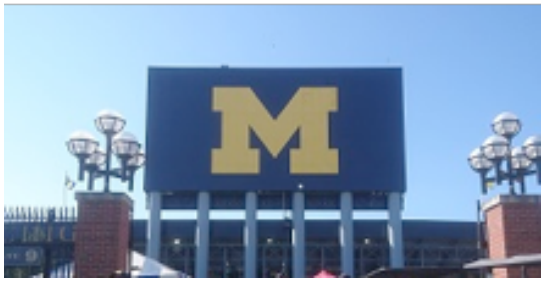
Research theme:
Advisor at the visiting university: Prof. Albert Shih
Affiliation: Mechanical Engineering, University of Michigan

I spent 6 months in University of Michigan. Firstly, I mention my research environment. I belong to the group of Prof. Albert Shih lab. They focus on biomechanical and they manufacture tissue mimicking material by 3D printer. At first, it was hard for me to catch up with other people in my laboratory because I had never studied that field. But, professor and members in my lab are so kind. Because they supported my research and I discuss my research with them, I could advance my research. Moreover, they sometimes took me dinner and playing. It was very good time to know their backgrounds and make friendship. Especially, Kai who is my mentor took me various places like Costco and casino in Detroit. All of these are good experiences for me. They would be leaders of industry, so I want to work with them as a coworker in the future.

Secondly, I would like to share my daily life. It was first time to live in US, so everything is new for me like sharing room, food, shopping and so on. In US, we need to pay money by credit or debit card. I realized convenience and risk of cards because my card was skimmed. So if you want to live in US, you should make some credit cards and be careful to save your cards.

Sometimes, I tripped to many places in US like Boston, Las Vegas and Niagara Falls. Especially, Red Rock Canyon, it's close to Las Vegas, was the best place to visit because the view of driving course was beautiful, we could go there 30 min from Las Vegas and it was very cheap. Actually, it's not so famous in Japan, but if you have time, I recommend you to visit there.

Finally, I really appreciate Japan-US Advanced Collaborative Education Program (JUACEP) for giving me such a great time.



Findings through JUACEP

Name: Tatsuya Okamoto
Affiliation at home country (Dept & Univ):
Dept. of Micro/Nano Mechanical Science of Engineering, Nagoya Univ.
Participated program: Medium course (Aug. 2017 – Jan. 2018)
Research theme: Ab Initio Molecular Dynamics Simulation about Dielectric Properties of Boron-doped Diamond-Like Carbon
Advisor at the visiting university: Prof. L. Jay Guo
Affiliation at visiting university:
Electrical Engineering and Computer Science, University of Michigan

Research in University of Michigan
I'd like to mention about my research at University of Michigan. The field of research in Prof. Guo group was completely different from what I did at Nagoya University. Before coming to the US, I thought my project theme in university of Michigan would be provided from Prof. Guo. However, the policy of Prof. Guo group was needed to prepare my theme by myself. First of all, I tried to make my new including both fields, Nagoya University and University of Michigan. It was of course first time to create my theme by myself, I read paper a lot, and finally, I can propose my theme to my Prof. Guo and he gave me an acceptance of my new theme. Then I started to my theme. I did research based on what I proposed for about four months. However, because of the theme I create was lack of detailed consideration, so I got in the situation to need to change theme. So I changed my theme to new one based on ab initio molecular dynamics simulation. I think big difference about research between Japan and US is the process of thinking. This research experience changed the view of thinking for the research.

Life in University of Michigan
I stayed the house with three roommates for six months. The lifestyle was full of freedom, can do everything we want to do. Before coming to the US I thought I want to start something new for me, so I started Marathon. And I joined the running group which found on Facebook. I run the Detroit marathon. I also joined soccer team because my roommate invited me to his soccer team. I practiced soccer every weekend to entry the tournament. Our team won the first prize finally.

Findings through JUACEP

Name: Yudai Suzuki
Affiliation at home country (Dept & Univ): Aerospace Engineering, Nagoya University
Participated program: Medium course 2017
Research theme: Failure Detection and Control of Distributed Electric Propulsion Aircraft Engines
Advisor at the visiting university: Prof. Anouck Girard
Affiliation at visiting university (Dept & Univ): Aerospace Engineering, University of Michigan

The life in Ann Arbor was the most amazing 6 months that I have ever had in my life. Here, I would like to introduce three things that made my life amazing and meaningful.

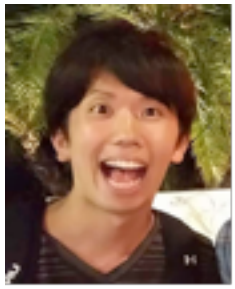
The first thing is the experience in my lab. Fortunately, thanks to great help of the JUACEP staff, I could get a chance to stay in a lab whose research area is very close to my interest and my research in Nagoya. The research experience was fulfilling. Compared to the lab life in Japan, I could devote more energy to only my own research because there are not any other tasks than doing my own research in the lab. Additionally, my mentor PhD student understood my poor English well and gave me helpful and insightful advices about my research direction every week. As a result, I was able to get research results simultaneously while pursuing my interest. This fulfilling time of research gave me a chance to think about what I want to do in my career. Now I want to continue working on my specialization field as an engineer. This experience helped me to have more concrete ideas about my career.

Many friends I met in the United States made my life too. At the beginning when I came to Ann Arbor, I had to do many things by myself to settle down to the new environment. It was a difficult time. However, I could enjoy this time a lot with helps of friends who I met here and are from Nagoya. I truly realized that we can't live without any helps of others because the friends in Ann Arbor made a difference in this situation. As far as I know, many friends have such warm hearts that gave me helps without expecting anything in return. In Japan, when someone does something helpful, I think we usually feel like that we owe them for what they have done for us so we have to do something in return, and vice versa. I suppose American people that I met here have less feelings like this, so they helped us a lot without expecting anything in return. Making many friends who are Christians was also a unique experience. Because there are very few people who have strong views on any religions in Japan, it was a unique and meaningful experience for me. They are rich in the spirit of giving helps to neighbors without expecting anything in return and accepting other's shortcomings or brokenness. I respect this aspect of them so much, and it was also a good chance to reflect on myself.

The third thing is all the experiences in the United States. I visited many places: Houston, Detroit, Niagara Falls, Grand Canyon, Las Vegas, Washington D.C, and Boston… It was fun and expanded my knowledge and vision. It was a privilege to work as a volunteer in Houston for Hurricane damage. I also enjoyed the nature in the Grand Canyon area the most. I spent New Year holidays with a lot of international students from all over the world in D.C. It was a memorable experience. Harsh winter in Michigan was also enjoyable.

At last, I would like to say the biggest thank you to my mentor, Will. He is such a great engineer that helped me a lot. Without his help, I couldn't spend such a fulfilling time in the lab. I highly recommend this program to those who are interested in studying abroad or broadening their visions through the lives in foreign countries no matter what their English levels are. Helpful and nice people would give you a lot of helps if you are open-minded enough then you might spend a wonderful life there.

Findings through JUACEP



Name: Yusuke Fukui
Affiliation at home country: Mechanical Systems Engineering
Participated program: Medium 2017
Research theme: Developing Immersive Virtual Realities for Human Upper Limb Motor Recovery after Stroke
Advisor at the visiting university: Prof. Jacob Rosen
Affiliation at visiting university: Mechanical and Aerospace Engineering at UCLA

The Japan-US Advanced Collaborative Education Program (JUACEP) has been one of the most exciting experiences in my career. I really appreciated JUACEP giving me this opportunity because I experienced so many things which are tough and also great. At first the life in LA was very challenging for me because of my English skill, and also because everything is different from Japan. But it has been so good so far and I feel LA is my home city right now. LA has so many diversity and cultures, which give me chances to learn about many countries. Therefore, I have become much more open-minded and I got confidence to live in the English speaking countries. It would be grateful if I have a chance to come back to LA near my future.

Friends in UCLA and in my lab are really competitive and smart. I could learn lots of things from them. Their knowledges are very adorable in wide fields. And they are so friendly that they took me many places for local people even on my first day in the lab. That made me so surprised because I feel it's really different culture and thanks to them, I could get used to LA so fast. And also they gave me some opportunities to enjoy American cultures. For example, my American friend invited me his home to enjoy thanksgiving dinner with his family. I talked with his family a lot and enjoyed the special dinner. That's so sweet and one of the best memory for me. My English skills were not so good, but my lab members were very welcoming. It was great to be in a laboratory environment with hard working staff, I really appreciated them.

The research in UCLA is very attractive and state-of-art, which gave me great experience about VR (Oculus VR) and coding skills (C#). The field of computer science and also VR is getting more popular drastically. It was very grateful for me to study the field in UCLA and in this laboratory. My professor assigned me to a leader position. So I could learn not only computer science skills, but also leadership and how to collaborate with many people including professor of other department and people who work for a company in NY. This experience encourages me to enter IT field after graduation. Overall, the program gave me great opportunity to feel environments studying in US and to meet adorable people who are friendly and open to socialize outside of work.

Findings through JUACEP

Name: Matsubara Fuga
Affiliation: Micro-Nano Mechanical Engineering and Science, Nagoya University
Participated program: Medium course 2017
Research theme: Shelf-life testing of bioink-containing tablets for 3D Pharming
Advisor at the visiting university: Prof. Benjamin M. Wu, DDS, PhD
Affiliation at visiting university: Bioengineering, UCLA

I've studied bioengineering in UCLA for 6 months as VGR under supervision of Dr. Benjamin M. Wu. The research life was extremely exciting. In the lab, there are various people who have different nationalities, cultures, values and so on. This diversity that I'd never experienced really inspired my brain because I was a typical Japanese who was born and raised in Japan. At the beginning of the stay, it was very tough to understand them due to my lack of language ability and knowledge of their cultures. But lab members were really helpful and made up my lacks. And now, I'm really missing them. I'd never been boring in such multinational environment any time. I had much fun even in daily conversation with lab members. Previously, I knew only Japanese culture and persisted on it, but now, the way of thinking has been changed completely. I love diversity.

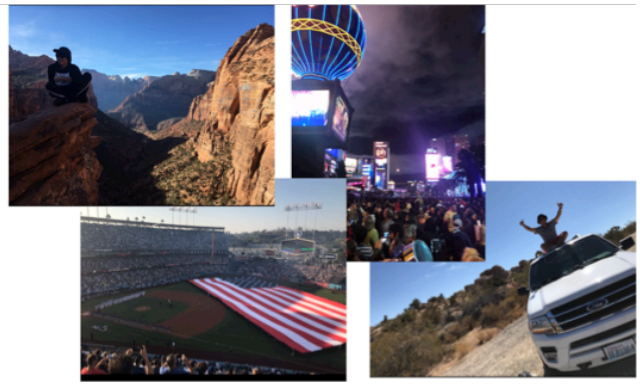
Next, I'd like to talk about research. I was involved in 3D Pharming project and conducted some experiments. 3D Pharming is the use of 3D printing to fabricate personalized medicine. Ordinary pharmaceutical products are defined by the amount of drug. However, it is weird that many people who have different physical and genetic profiles take same medicine. Consequently, this one size fit approach fails. The aim of this project is to invent technology that can fabricate personalized pharmaceutical tablets by using 3D printing. I really impressed by its possibility to bore innovation in pharmaceutical field. This research was brand new for me. Therefore, I had to read many papers to get background knowledge. It was really heavy and I couldn't sleep a couple of days. But such research days were interesting for me because I like learning new things. Fortunately, my supervisor allowed me to design the experiments. So, I could do them as I like. And luckily, I totally succeeded and the results were almost good. I'm honor of having done research as a member of such state of the art project.

In day off, I traveled many cities such as New York, Las Vegas, San Francisco, San Diego, Boston. In each city, I got unforgettable memories. Every city have their own color and I enjoyed them. National parks were also amazing. I could have visited most of national parks in US and seen absolutely splendid view. I really like nature. Sometimes, we had car trouble or something bad during trip, but they strengthened my mental so much and are good memories now.

Finally, I'd like to say thank you to Dr. Wu and all other lab members for supporting my research and being very kind to me. Without their help, I wouldn't have made nothing. And I appreciate JUACEP for giving me such awesome experience to study in UCLA. This experience changed my life and I'm sure that it'll give positive impact to rest of my life. If I can, I want to come back to LA especially when Japan is in winter.

Last Meeting

Lab Dinner



My 6 months in LA LAND

Name: Kai Iio
Department of Molecular Bioengineering Nagoya University
Participated program: Medium course

Research theme:
Advisor at the visiting university: Prof. Gerard Wong
Department of Bioengineering UCLA

I am in my second year for my master's. Participating JUACEP program delayed my graduation for 1 year, but I had a wonderful experience in the US. I stayed in LA.for 6 months. The best memory in L.A. is that I made a lot of friends all over the world. Los Angeles has many nationalities. So I met people from all over the world in the past 6 months. I hang out with them around Los Angeles, and I traveled in Canada and Mexico with them. We talked about various things such as culture, religion and the image of Japan. I was shy before I went to L.A, but I think it was improved a little bit. Because foreign people basically speak more than Japanese people so I talked more than when I am in Japan. I wish I could go to the countries of my best friend. I really realized that even if the nationality is different, I can make friends .If I can speak English more fluently, I could have more friends. So I will continue to practice English after I return to Japan. Also, I would like to know more about the cultures and histories of the world. Those will help me to communicate with foreign people. So I do recommend L.A to next JUACEP students. (But things are very expensive.)

In terms of research in UCLA, I learned the flow of research. First, I make the hypothesis, and then set a proper experiment that can answer the hypothesis precisely. And make new hypothesis from the results of experiments. My research theme was b

acterial biofilm. Using computer programing and a microscopy, we observed bacterial behavior. It was so difficult to research because I didn't study computer programing. But I think it was good experience for me to discuss with my professor and laboratory members and to write JUACEP report in English.