

Super Great Experience in Michigan

Name: Shun Arakane

Affiliation: Micro-Nano System Eng. Nagoya Univ.

Participated program: Long 2014

Research theme: FABRICATION OF RADIO FREQUENCY DEVICES BY USE OF 3D PRINTING TECHNOLOGY

Advisor at Univ. Michigan: Prof. L. Jay. Guo

Affiliation: Electrical Electronics and Computer Science



My research topic in University of Michigan is fabrication of radio frequency devices by use of 3D printing technology. I learned basic knowledge about RF device and considered about how to make that kind of devices. I think it was precious experience that I could do a research which is different from what I have done in Nagoya University. I also think it was lucky I joined a big research group because almost all of members are Ph.D students or visiting scholar, so I could be inspired those people who had a lot of experience.

I lived with Taiwanese and Chinese roommates during staying in Michigan. Therefore, I had a lot of chance to speak English on a daily basis and that help me to improve my language ability. I also felt different culture from these roommates. At first, I confused the different life and attitude, but I gradually understood their culture. Also, I was able to meet so many people who have different cultures by joining meet up and conversation circle. I learned a lot of things from students because people living in US, even they are younger than me, have individual opinion and will. Their way of thinking increased my motivation.

When I had free time, I traveled many places in US. I visited magnificent palaces such as Grand Canyon, Grand Teton, Niagara falls and Yellow stone. These experiences were so good because I love nature. Moreover, I became to like American personality because when we went these places, many people greeted us. They are so bright and friendly.

Finally, I would like to thank many people involved in JUACEP. They gave me a chance to study in UM and planed our stay in US very well. I also appreciate great help from Prof. Guo group member. They helped and taught me when I was in trouble. Without their help, I would not have done anything. I definitely would like to go back Ann Arbor not in winter but in summer.



Grand Teton national park



Drinking with roommates and friends

Great Experience in US

Name: Yoshihiko Hagiwara

Affiliation: Mechanical Science Engineering, Nagoya University

Participated program: Middle (summer to winter) 2014

Research theme: Effect of Coolant Temperature on EGR Cooler fouling on GDI Engine

Advisor at Univ. Michigan: Prof. Boehman

Affiliation: Mechanical Engineering, University of Michigan



I belonged to Prof. Boehman's group, which focuses on automotive engine. In the lab was the research on EGR cooler fouling, which is one of the parts of engine. I worked with a PhD student on this project, and had a lot of chance to discuss it with him. That was good experience for me to improve my English skill. In addition, research itself was exciting because I was so interested in automotive industry. As you know, famous American automotive companies' bases are located in Michigan, such as Ford, GM, Chrysler, Which are called BIG 3. Since Michigan State is an important place of US automotive industry, University of Michigan has several engines, and many researchers are working on the research related to engine.

In addition to working in the lab, I had a great experience in US. I visited many places during holidays, and enjoyed beautiful nature, gorgeous city, exciting event and interesting museum.

Michigan has lots of nature that deserves to visit. Although those are not exciting one like Grand Canyon, Yellow Stone, and Yosemite, we can enjoy silent nature that can relax us. When I went to Huron National Forest during winter break, nobody other than me was there, and I had that beautiful nature to myself.

The most exciting event in Michigan for me was Detroit Auto Show, which is held in Detroit once a year. It is one of the most famous Automobile shows in the world. There you can see many new cars and concept cars which can attract automobile enthusiasts.

Finally, many people helped me working in the lab, living in US and enjoying the stay. I was able to spend a nice time with kind people. I really appreciate all their kindness. I won't forget this great experience.



JUACEP Report

Name: Kai Ito

Affiliation: Department of Quantum Engineering, Nagoya University

Participated program: Medium term 2014

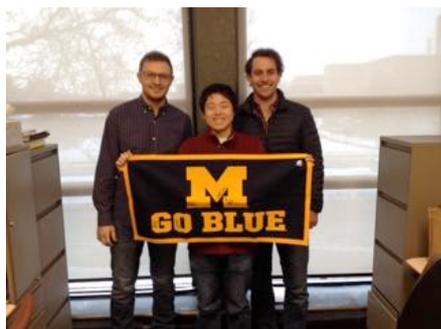
Research theme: Dual Particle Imaging System

Advisor at Univ. Michigan : Prof. Sara A Pozzi

Affiliation: Detection for Nuclear Nonproliferation Group
University of Michigan



I went to University of Michigan for 6 months and I was working on localizing radiation source to prevent from diversion to nuclear weapon. In my work, I simulated the detector response to evaluate validity of the system performance and I proposed a new concept by myself to improve the system performance. It was not an easy work for me but I did make it because my lab colleagues shown in the picture helped me whenever I asked some question. About the dairy life, there are two point that you should know before you come to Michigan. The first point is that Michigan is NOT too cold in winter. Actually I experienced -25 degrees during my stay but if you come here, you will be used to the cold weather and you can enjoy the crazy temperature. So don't worry the Michigan weather too much. The second point is that you should active positively. There is no entertainment stuff around Ann Arbor but this is good point. Because you can know your friends very well. In case of me, I was a member of University of Michigan Field Hockey Club and I joined some tournaments with my teammates. We won at the tournament and got award! Also, I made the best friends I met ever and we cooked together so many times!! I had a great time at Ann Arbor. Actually, I visited to some big city such as New York, LA and Boston but I still think Ann Arbor is the best city in the US because of my experiences. Thanks for all the times I spent with my friends and I hope people who will go to University of Michigan same as me will enjoy a life in Ann
A r b o r ! ! !



Findings through JUACEP

Name: Eitaro Nakatani

Affiliation: Micro-Nano Systems Engineering

Participated program: Middle (Summer) 2014

Research theme: Synthesis of Al₂O₃-TiN composite nanopowders by Liquid-Feed Flame Spray Pyrolysis followed by Ammonolysis.

Advisor at Univ. Michigan: Prof. Richard M. Laine

Affiliation: Material Science and Engineering, University of Michigan



I had studied in Prof. Laine lab at University of Michigan. My research was synthesizing ceramic composite nanopowders by LF-FSP, which is original equipment in my lab. Research background at UM was different from what I had studied at Nagoya University. However, everyone in my lab was so friendly and kind to me. They told me what I did not know in a way that is easy for me to understand. I really appreciate it. I will never forget enjoying lunch with them while chatting every day.

There were meetings in my lab on every Friday afternoon. We talked what we had done for that week, and discussed with our professor and students. I had opportunities to speak English in the meetings. When I joined the meetings for the first time, I could not communicate well and could not understand what other students said. However, my English skill were improved day by day. Finally, I became able to discuss my research work with them. This will be definitely memorable experience in my life.

I went to a lot of places during my stay. Florida was a very comfortable city. I did snorkeling and parasailing there. I ate a lot of delicious seafood. It was so nice. I also went to New York with my friends at the end of last year. We joined the Countdown Live at Times Square. We had to wait for half a day. We could no longer take another step while waiting, because there were so many people around us. It was so crowded. It was so fun, but I will not try to go there again. It was so nice experience once in my lifetime.

Ann Arbor is a nice place to live. It is quiet and surrounded with nature. We can find squirrels and deer around UM. It was so cold in winter. However, if there are people who want to study in UM through JUACEP program, you can get used to the coldness soon, so you do not have to hesitate to go there.

Through this program, I got a lot of great experience and made a lot of international friends. This stay is my treasure for me. I would like to express my gratitude to Prof. Laine, my lab members, and JUACEP.



Findings through JUACEP

Name: Takayuki Hasegawa

Affiliation: Department of Mechanical Engineering,
Graduate school of Engineering, Nagoya University

Participated program: Short (Summer) 2014

Research theme: On-chip Multiplexed Cellular Immunophenotyping with
LSPR Barcode Microarray

Advisor at Univ. Michigan: Prof. Katsuo Kurabayashi

Affiliation (Dept.): Department of Mechanical Engineering



First of all, I appreciate that JUACEP gave me the great opportunity to do research in University of Michigan for 2 months. My research theme at U of M was development of the multiplexed cellular immunophenotyping device. Post-doc taught me how to make the previous device first. My English skill was not enough to communicate smoothly but all of Kurabayashi lab members kindly explained so that I could understand. Thanks to their kindness, I could start working in the lab smoothly. In the end of August, I began designing the new device with doctor student. Though I have designed some microfluidic device in Japan, discussion about the device design in English was a difficult and nice experience for me.

In the end of this program, I was invited home party by professor Kurabayashi and I went to professor's house with some JUACEP friends. I experienced 'American' home party and enjoyed eating Mexican food and talking with. We played American board game together after dinner. It was so fun and we spent amazing time.



Life in the USA

Name: Ikuma Higo

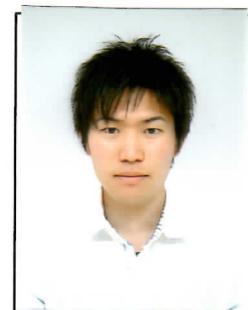
Affiliation: Department of Mechanical Science and Engineering,
Graduate School of Nagoya University

Participated program: Short (Summer) 2014

Research theme: Quantifying Foot Kinematics during One Legged Balance

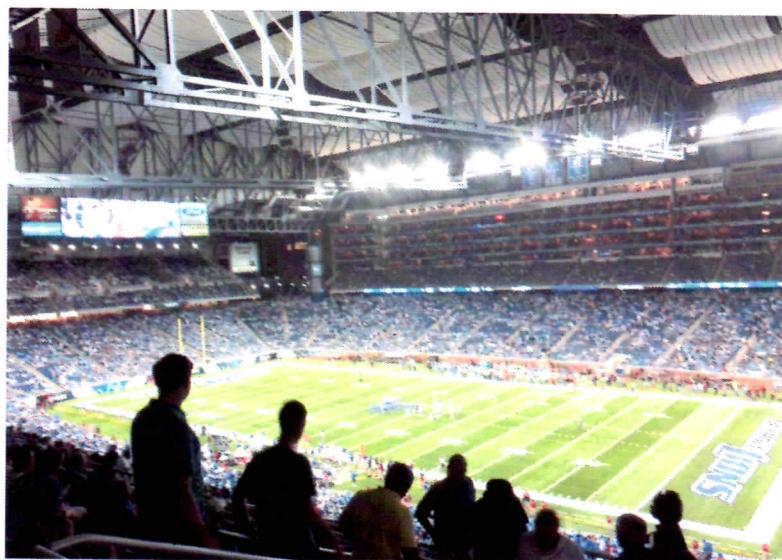
Advisor at Univ. Michigan): Prof. James A. Ashton-Miller

Affiliation: Department of Mechanical Engineering,



My research theme is one legged balance. The test of timed one leg balance is used in clinic all over the world to assess a patient's balance. The maximum time that humans can balance on one leg decreases significantly with advancing age, especially if they have peripheral neuropathy (PN) in both feet. To grasp what is happening while subject is standing on one foot, 3-D Kinematics and foot reaction force are measured. I established experimental equipment and conducted pilot experiments. Healthy younger and older subjects participated in my experiment. The older subject has one foot that has peripheral neuropathy and one foot that doesn't. The younger subject stands on his right leg with his eyes open and closed. The older subject on his right and left leg with his eyes open. I assumed that human is 3 rigid links and measured angular velocity and angular acceleration. These data and other data which will be measured will be used to analyze human balance.

In my daily life, I always learn new things. I live a regular life. I waked up early and researched hardly on weekday. I went on a trip many times with my friends on weekends. We visited Niagara Falls, Chicago, Detroit, Washington and so on. Niagara Falls were so magnificent and the view of Chicago was so beautiful. We enjoyed lions game and went sightseeing at the Smithsonian. I appreciate this program and want to thank all of the people who have been involved with me.



Findings through JUACEP

Name: Akira Hirota

Affiliation : the Department of Mechanical Science and Engineering

Participated program: Short (Summer) 2014

**Research theme: Modeling and Simulation of the Effects of a Therapeutic
Low Frequency Vibration Device for the Human Body**

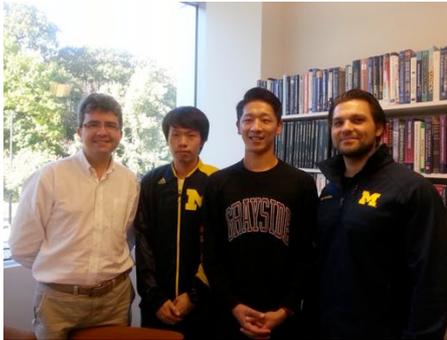
Advisor at UCLA/Univ. Michigan: Prof. Bogdan Epureanu

Affiliation: the Department of Mechanical Engineering



-----Research-----

I worked on modeling and simulation of human body and vibrating device. I mainly utilized the simulation software ANSYS, which I'd never ever used before. Therefore, I had to begin with getting used to ANSYS, but I was given enough time to learn much about that and was able to keep my own pace. Even though the supervisor has been so busy that I cannot see through the day sometimes, he spared a couple of hours for a weekly meeting and gave me lots of advice. In addition, he assigned me whatever I need, including independent PC, experimental device, and so on. Totally saying, the environment for the research was perfect and I could make a great progress.



-----Life in Ann Arbor-----

We spent almost all of the 2 months in Ann Arbor, which is located in the middle of the States of Michigan. It has very country-like atmosphere; bus drivers always talk to us very friendly, someone helps me when I'm in trouble with the way to somewhere, you can see wildlife squirrels and sometimes deer even in the campus, ...etc. What I'd like to emphasize the best is that everyone in Ann Arbor loves their home town. You can see lots of people dressed in Michigan T-shirts everywhere. In a football much, the seats were almost full with blue and yellow even though it was just one of the matches of college league.



JUACEP Report

Name: Kodai Imaeda

Affiliation: Department of Micro-Nano Systems Engineering,
Graduate School of Engineering, Nagoya University,

Participated program: Short (Summer) 2014

Research theme: A study of biodegradable polymers as candidates for
temporary packaging of implanted magnetoelastic resonators

Advisor at Univ. Michigan: Prof. Yogesh B. Gianchandani

Affiliation: Electrical Engineering and Computer Science



I had spent in University of Michigan for two months. I applied this program because I wanted to use English in my special field. I'll introduce my life in Michigan.

First, I introduce about the research I did in Michigan. I researched in the center of Wireless Integrated MicroSensing and Systems Institute. I researched biodegradable polymers for temporary packaging of the resonators because the resonators were broken during implantation. I researched with an assistant research scientist. In the first day, I received many references. I read them and investigated prices and sources of necessary things in the experiment. However, this material wasn't accepted in the meeting with professor. Then, I had to search alternatives. I read many references and put up many candidates and investigated many things respectively such as fabrication process, degradation time and prices of necessary things. I discussed candidates with the assistant research scientist every day. We summarized candidates and went to meeting with professor. As a result, one of them was accepted and purchased materials. After arrival of them, I started the experiment. PhD student took over my experiment. I'm looking forward to results told by him.

Second, I introduce about my life in Michigan. In our first day, we bought cookware and cooked almost every day. So, I didn't miss JAPAN regarding food. On weekdays, I usually woke up at 6:30 a.m. and went to school. After returning a hotel, I sometimes took exercise such as running. Michigan has rich nature and enjoyed running. On holidays, while I sometimes went to university, I could go on a trip, go eat out with my friends, and watch sports. They were very fun.



MLB



Indian restaurant with my friend

JUACEP Report

Name: Masato Ishii

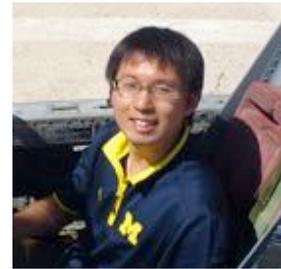
Affiliation: Department of Mechanical Science and Engineering,
Graduate School of Engineering, Nagoya University

Participated program: Short (Summer) 2014

Research theme: Task Scheduling with Energy Optimization

Advisor at Univ. Michigan: Prof. A. Galip Ulsoy

Affiliation: Department of Mechanical Engineering, University of Michigan



It was a wonderful time that I stayed in the U.S. during this summer.

I was worried about staying in the U.S. before leaving Japan, because that was the first time for me to stay in another country. But thanks to the kindness of the people in the U.S., I was getting used to the environment there. For example, on the first day to the university, I had trouble at a bus stop which bus to ride. An old man and a student I met at a bus stop, talked to me friendly and guided me to the university kindly. Through the check-in process, staff of the international center of the university answered my questions clearly.

The international center held lots of workshops for new international students during August. I attended some of them and they introduced me a lot about things in the U.S. and differences from other countries, for example, communicating manners with advisors, traveling information, laws and driving customs in the U.S. The workshops helped me a lot to get used to the stay in the U.S. quickly.

The research topic I worked in the University of Michigan was similar to the one in Nagoya University. I introduced my research to the host professor at the first meeting on Skype in May, and set the research topic roughly at that time. During the summer program, we had meetings every week to discuss the plan of the research.

The campus and the town were beautiful. The roadsides were covered with grass, there were lots of trees and you can find even wild animals, such as squirrels, rabbits and ducks, on the roadsides!

On weekends, I went traveling to many cities. There are lots of great museums around Michigan, such as Henry Ford Museum, the museum of Science and Industry and the National Museum of the United States Air Force. These museums are one of the biggest museums in the world, and have a lot of valuable collections. I really enjoyed the exhibits and that was one of the most impressive and educative experiences of my stay. Sometimes during the travels alone, I had some chances to talk with people. Those experiences motivated me to learn English more.

In conclusion, it was great to study abroad. I learned English a lot and motivated me to study it more.



JUACEP Report

Name: Yuki Makanae

Affiliation: Department of Chemical Engineering, Nagoya University

Participated program: Short (Summer) 2014

Research theme: Visible-Light Photocatalyst Sr and N Co-doped TiO₂
Synthesized by Liquid-Feed Flame Spray Pyrolysis

Advisor at Univ. Michigan: Prof. Richard M. Laine

Affiliation: Materials Science and Engineering Department,
University of Michigan



I visited University of Michigan (UM) for two months and researched in Prof. Laine group. Let me introduce what the life in UM was like.

First, I introduce about the research. Laine's group focus on the field of nano-oxide powder. Our research emphasizes the direct synthesis of single and mixed-metal oxide nanopowders by liquid feed flame spray pyrolysis method. I have been studying synthesis of nanopowders in Japan, so I learned bases of synthesis and the USA research process through this research project. When I stayed in UM, I got the feeling of the motivation of students who study at UM is so high and impressed me a lot. I widened up my potential and practice my skill at top University (UM) in the world and then reconsider my lacking point for my future. I make sure that I can make use of this valuable experience in my future works and career. I would like to thank my supervisor "Prof. Laine and PhD student Eongyu" for giving me the perfect opportunity to gain engineering research skill and international experience as well as cultural experience in the USA.

Second, I introduce about the life in USA. Ann Arbor is very beautiful city. Ann Arbor has a lot of beautiful national parks and nice scenery which always heal you. That was really nice. Michigan State is located near big city such as Toronto, Chicago, Detroit and NY, so I traveled many places on weekends. I concentrated on working on weekdays, on the other hand, I spent good time with my friends on weekends.

Finally, UM win a high reputation as one of the most prestigious universities in the world. At the same time, UM has reputation in sports, especially football. Therefore, there are students from a variety of nationalities. These students interact with each other. Fortunately, JUACEP can provide you with such an awesome opportunity to gain experience we have never had in Japan. I made precious friends during my stay which was short, though. I am very proud of many unforgettable UM experiences with them. I am sure that you will gain a great experience. A new world is waiting for you.



Precious Experiences in University of Michigan

Name: Kimihide Odagiri

Affiliation: Mechanical Engineering, University of Michigan

Participated program: Short (Summer) 2014

Research theme: Evaporation characteristics of PTFE-Wick-Insert Loop Heat Pipe

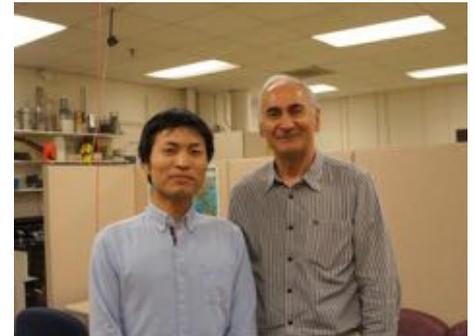
Advisor at Univ. Michigan: Prof. Massoud Kaviany

Affiliation: Department of Mechanical Engineering



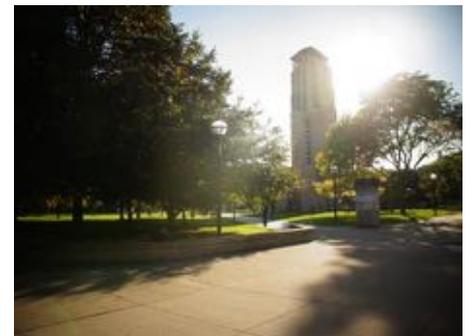
I visited University of Michigan for two months and worked in Prof. Massoud Kaviany's laboratory. I could have the amazing experiences while I stayed in Ann Arbor. In this report, I'd like to show you about my study and life in the U.S

First, I introduce about the study which I did in the Prof. Kaviany's laboratory. My theme was "Evaporation characteristics of PTFE-Wick-Insert Loop Heat Pipe (LHP)". I tried to develop the model of evaporation mechanism in the LHP evaporator. Prof. Kaviany gave me many chances to have discussions with him. I had discussions 3 times a day tops! The time of the first, it was hard and difficult for me, however I could become to feel it interesting and exciting little by little. Through the discussions, I could learn a lot of technical knowledge of heat transfer and how to develop the models. In addition, Prof. Kaviany taught me a lot of things which will become important in my future study life. He said many times "Let's think what the most important questions in your study. Let's think what the most impacting point in your study." Our time is limited and these questions show us the way to make the innovations. I think this is very important idea for the engineer and researcher. I want to keep thinking about these questions. And I will never forget his words in the future. I felt that the discussions were very exciting and fruitful, however at the same time I felt irritated that I couldn't tell my idea fluently and exactly in English. In order to have better and more fruitful discussions, I want to study and practice English harder.



With Prof. Massoud Kaviany

Second, I introduce about the life in the U.S. University of Michigan has many campuses and they are very beautiful. Especially, our engineering campus (North campus) is surrounded by plentiful nature. I loved to stroll with a cup of coffee in north campus after the exciting discussion. It was memorial time for me. Meanwhile, I spent bags of time for my research during the weekday, I spent interesting weekend. For example, taking trip to Chicago and Washington D.C., watching football game and joining the party for international students. The picture shows the REAL Space Shuttle, Discovery in Smithsonian's National Air and Space Museum. It was one of my dreams from childhood to see real space shuttle, so I was happy to realize it. It was also unforgettable memory in these 2 months.



North Campus

I could learn a lot of things and have wonderful experiences during two months. I want to put these experiences to good use for the future. Finally, I'd like to express my gratitude to JUACEP for their much support. Thank you very much.



Space Shuttle, Discovery

Findings through JUACEP

Name: Kohkan Sai

Affiliation: Graduate of School Engineering
Nagoya University

Participated program: Short (Summer) 2014

Research theme: Design and Analysis of a Device for Therapeutic Low
Frequency Vibration of the Human Body

Advisor at UCLA/Univ. Michigan: Prof. Bogdan Epureanu

Affiliation (Dept.): Department of Mechanical Engineering



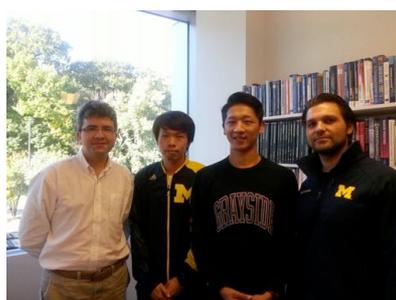
It was the most interesting summer I've spent in my life. I want to say living in foreign country is far different from going on a trip abroad. I mean if you live in, you have to speak English a lot and you can know a lot of international friends! I spent in U of M for 2 months and was in Prof. Bogdan Epureanu lab. Although the research area in Michigan is dynamics, different from control in Japan, thanks to kind professor, I can work in the lab without problems. Let me introduce life in laboratory.

In my case, I had a research project which just started in our lab, so everything is new for me and my supervisor. I have a meeting once a week and at that time we talk with progress and decide what to do by next week. I used ANSYS, which is analysis software and solidworks, which is 3D CAD software, both of those I've never used in Japan, so it was very precious experience for me. At first I worried about different research area from Japan a little bit, but now I think it made my work more interesting. Finally I can make progress to some extent, so my professor was very glad to that. It was very interesting to take part in the project in an early stage. And fortunately I have Japanese in my lab, so I can ask a lot of life in U of M and Ann Arbor and why he decided to study abroad. I'm satisfied with my life in Ann Arbor.

In weekdays I went to university to do research almost every day, but in weekend I often went trip or hung out with my friends not only Japanese who participate in this program but friends in Ann Arbor. We went to Toronto in Canada, Niagara Falls, Chicago, Detroit, New York and so on. And we sometimes hung out around Ann Arbor, actually not so many places to visit, some restaurants in Central Campus, Kayaking in the river, Cedar Point, which is one of the most famous amusement park in the world, football game. Among them, the football game was really exciting! The football team in University of Michigan is Wolverines and when the game is held in the Michigan Stadium, which is one of the largest stadiums in the US, so many people in Ann Arbor get into swing and has party around the stadium. We can enjoy the game like other people although we are visiting student, so I really recommend watching the wolverines' game in the stadium.

Obviously the food is different from Japan. Although you can find some Japanese restaurant or noodle restaurant, sometimes it is different from Japanese one or very expensive. So if you want to eat Japanese style food, I think the easiest way is cook your own food. Actually there are some Asian supermarkets, so it is not difficult to cook if you have kitchen. I think the food will be a problem, and I sometimes buy Asian food and cook myself in Ann Arbor.

Finally, fortunately I can meet a lot of kind and nice friends in Ann Arbor. Thanks to them, I can get much precious and great experience there. When I talk with them, I realize I can't speak English a lot. So now I want to learn more English and want to talk a lot with them. Before I went to the US, English is for studying and for some evaluation. But now I realize again, English is a language and for communication. I had very good time and realized some important things through this program. I really appreciate this program and the support members of this program.



Findings through JUACEP

Name: Shoko Kodama

Affiliation: Department of Chemical and Biology and Engineering
Graduate school of Engineering, Nagoya University

Participated program: Short (summer) 2014

Research theme: Solvent effects for Redox Flow Battery

Advisor at Univ. Michigan: Prof. Levi.Thompson

Affiliation: Department of Chemical Engineering



The memory of U of Michigan is the best one in my life. I have unique experience here and it will change my future life a lot. I joined Prof. Levi's group in Chemical Engineering and worked on the field of electrochemistry. I'd like to introduce two of my precious experience in Ann Arbor.

First, the research environment at U of M is totally different with the one at Japan and it surprises me. In U of M, our group had around 30 members and there are lots of PhD students in it. They are always busy at classes and experiments, but enjoy their researches with strong interest. Our group meeting is held twice a week, they show their weekly results using PowerPoint, and discuss with each other even with undergraduate students. Surprisingly, they had their own opinions and strong passion, they don't only depend on professor's advice. They make effective weekly plan, and try to get beneficial results. Actually, my research field in Nagoya Univ. was totally different from the one in this group, thus I needed long time to understand and get used to. However, I had a mentor who train and support me, I could learn faster than I expected. He is a 3rd year PhD student and wanted to get more results. His teaching way was reasonable, and easy to understand, and when I run each experiment and get results, he always asked me my motivation and goal. I have never discussed about them in detail before come to this group, therefore it was really tough for me, but I believe I could improve my way to do research. There are lots of people who discuss about research even in lunch time, I felt their passion of research, and turned to respect them and hope to become like them. I'm very lucky to see such a great students. Fortunately they held farewell party for me, it is memorable.

Second, my life was changed a lot. Who I often see, and where I stay were totally changed. I had Taiwanese roommates, they were welcome and nice, even I'm not good at speaking. We were chatting a lot especially about Japanese image from Taiwan. Japanese animation, manga, and maid-café, which are quite famous in Taiwan. Chatting and having meals with them were memorable. There are many international students who come to get degree with their own clear dreams or purposes. They have various background, for example, many PhD students have already gotten married. Chatting with people who have unique background inspired me a lot and what they tell me broaden my future. Moreover, U of M was located in countryside, we can see nature easily for example squirrels and dears are living in forest on campus. Kayaking on campus was so good for relaxing. USA has lots of highway, we can go to many famous places by car, for example, Chicago, Toronto, Niagara Falls, and amusement park. We can enjoy short trip each weekend.

Although the time I stay in US was only two months, it changes me amazingly. I never forget this experience, and want to be more active and motivated in the future.

Finally, I would like to express my gratitude to JUACEP, my lab member in U of M and Nagoya Univ., and my friends for their supports.



Findings through JUACEP

Name: Keita Fujii

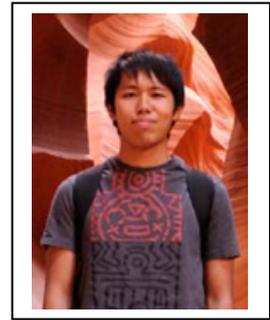
Affiliation (Dept & Univ): Aerospace Engineering, Nagoya University

Participated program: Medium term (Summer to Winter) 2014

Research theme: Spreading of drops under gravity influence

Advisor at UCLA: Prof. Pirouz Kavehpour

Affiliation (Dept.): Mechanical and Aerospace Engineering, UCLA



I've never lived abroad and I could hardly speak English before I participate in the JUACEP program. JUACEP program was great opportunity for me to improve my English skill. Belonging to the laboratory at UCLA was valuable experience. The mates in the lab were so kind for me even though my English was terrible. Attending conference (APS Division of Fluid Dynamics) held in San Francisco with all lab members was so impressive. Their presentation skill was very high, and they enjoyed their presentation. I thought I need to learn from them about that.

Most impressive thing is visiting JPL(Jet Propulsion Laboratory) with two JUACEP program participants on September. We had presentation. Some researchers guided us JPL. We could see the test of Mars Rover and some laboratory. We were so excited to see them in the forefront of space exploration. After visiting JPL, we were invited for dinner at Caltech. We enjoyed that time. Furthermore, I was invited to lunch by Dr. Gaj Birur and his wife on December. We enjoyed delicious sushi and conversation.

I had a great time in LA through JUACEP program. It was the good opportunity to think about my future life.



Lunch with Dr. Gaj Birur and his wife



Lab member

Make Myself Changed in LA

Name: Shuji Nota

Affiliation: Mechanical Science and Engineering, Nagoya University

Participated program: Middle term 2014

Research theme: Effect of thermal annealing on microstructure in 3D IC microbumps

Advisor at UCLA: Prof. King-Ning Tu

Affiliation: Materials Science and Engineering, UCLA



This program is aimed for research in US but I could also learn how people are in US. During six months, I could really reconsider myself. Finally I can feel much grown and strong now. I hope that this precious time makes me helpful in my future life. Therefore, I want to tell you just some parts of my experiences, which make myself changed in LA.

First, I want to tell you how students in US act on campus. At first, I felt lonely because they are usually likely to be alone. That point is completely different from Japanese community. In Japan, I got used to do something with friends. For example, when we go to lunch/dinner or possibly when we go to restroom, we basically ask some friends to go with us. However in US, when they have meals or when they walk on campus, they are usually alone and they enjoy their own time by listening to music or something etc. One day, when I asked one of my friend why it's common in US, he answered one of the reasons. They've been grown up in the environment that they should be independent on their family after high school, so they should live by themselves. I think that it makes them strong. That's why they aren't dependent on anyone and they do everything by themselves. Since then, I thought that I should be stronger even if I feel lonely.

Second, Japanese students who study in US inspired me. As a matter of fact, a lot of Japanese students are studying in US and most of them have stayed there since they graduated from their high school. Even though they have many difficulties in studying in US for the first time, they are getting over them. I respect them because it makes themselves grown. Finally I thought that I should get grown mentally and physically as well as them.

Third, I want to tell you the most important thing here. That mean I could meet great Professor and precious friends. First one is Prof. Tu. He is a great tender person and he always helped me about any matters. Actually, he knows this program because some students in his group have joined this program before. At this time, he welcomed me to his group for six months. I exactly remember that he made me relieved by joking when I went to see him for the first time. And he said that I should not only study but also travel around US and enjoy my life here. I went to many good places around California. The best place I've ever been is Antelope Canyon in Arizona. Don't miss it! Anyway, I really thank Prof. Tu for everything. Second one is precious friends in US. I sometimes hung out with friends. On day, my roommate who is Rumanian invited me for late dinner at 11:30pm. He has some trouble in his private love matter and we tried finding its answer for about 3hours. It was a crazy night but it could make us best friends! I also went to another friend's house some times, and we enjoyed talking something which we can't say here. On the other day, a member of our research group invited me for BBQ party and we shared good time. The last night in LA, one of members in our research group treated me for dinner. I spent the valuable dinner time with him. The last one is people whom I don't need to say. It's JUACEP members from Nagoya Univ! No matter how difficult the situations were, they helped each other. Now, I thank all of them whom I met in LA, and they are definitely my precious family forever!



Group picture of Prof. Tu's group

I haven't been abroad for such a long time. I could meet many kinds of people who have different backgrounds, and I could learn a lot of things from them. Now, I feel it makes myself changed. If you are interested in this program, don't miss this opportunity! I absolutely make sure that you can do it with strong mind!!

Findings through JUACEP

Name: Takayuki Kawasaki

Affiliation: Mechanical and Science Engineering, Nagoya University

Participated program: Medium (Summer) 2014

Research theme: Optimisation of foams for impact absorption

Advisor at UCLA: Prof. Vijay Gupta

Affiliation: Aerospace and Mechanical Engineering, UCLA



I joined the JUACEP program because I wanted to improve my engineering skills as much as possible and know what I didn't know. The experience in United States is unforgettable and exceeded my expectation.

I worked on a project that I had little background. So I learned new knowledge and skills. In the first couple months I felt that my group members didn't trust me because of limited English, knowledge. But I was really glad that they finally welcomed me as a member of them. The moment was the greatest for me. Now we are good coworkers and friends.

The rest of the time that I was not in laboratory, I was trying to meet new people. So I have many new friends. Some of them made me feel home and some of them made me inspired. In my life, it is important who I meet and who I go with.

I think that the JUACEP program was great opportunity to improve my problem solving ability, get new way of thinking and get new friends.



Precious student life at UCLA

Name: Keisuke Uematsu

Affiliation: Department of Materials Science and Engineering,
Graduate School of Engineering, Nagoya University

Participated program: Middle term (Summer and Autumn), 2014

Research theme: Atmospheric Plasma Treatment of Ti for Bonding of Different

Advisor at UCLA: Prof. Jenn-Ming Yang

Affiliation: Department of Materials Science and Engineering,
University of California Los Angeles (UCLA)



My study abroad in UCLA was unforgettable for sure. It was impossible to enjoy American life without a lot of support. I've had so much trouble until I settled down in Los Angeles. Especially, lack of my English skill made me struggle with getting driver's license of California and looking for new residence by myself at the beginning of this program. However, I've gradually been getting used to American culture through many experiences I had. With my driver's license, it allowed me to travel everywhere by car and visit many places where I was interested in, such as Grand Canyon. There were so many national parks that I felt relaxed and refreshed in the warm. All of them looked beautiful because of their great sceneries. These things are wonderful memories for me.

It was the first time to stay abroad this long. Whenever I was confused about how to work in my lab, all of my lab members always helped me out. Especially Jose and Tait, who were students of JUACEP program in UCLA, were friendly and looked after me well. When I was not able to cut my samples in the lab, Jose and I went to a machine shop located outside of UCLA by a rental car. I'd like to say thank you to their support. I had a great time going out for drinks and trying many types of cuisines with JUACEP students.

Finally, I'd like to express my gratitude to people who supported me, especially JUACEP and professor Jenn-Ming Yang. I believe this experience will be very useful for future study and career. I will recommend the program to anyone who wants to study abroad as a researcher.



Findings through JUACEP

Name: Takahiro Yamashita

Affiliation : Mechanical and Science Engineering,
Graduate school of Engineering, Nagoya University

Participated program: Middle term (Summer) 2014



Research theme: Gut on a chip

Advisor at UCLA: Prof. Benjamin M Wu

Affiliation : Bioengineering, UCLA

I was working on Bioengineering at UCLA for six months. My study is “Gut on a chip”, which mimic the structure of intestine. gut on a chip offers a new and potentially powerful alternative platform for studies on human intestinal physiology, gastrointestinal diseases, toxicology, and drug development.

I had a lot of experiences at UCLA. First, I lived in sharing room. This is first time I live in sharing room. I have five housemates there. They came from various countries (For example, Chinese, German, Mexico, Saudi Arabia and Iran). In sharing room, I learned many things such as culture and field of academic. It is so interesting for me and I became to think that I would like to learn about these more. In addition to housemates, I made many friends of foreign country. I appreciate their kindness and hope to see them again someday. If they come to Japan, I show them around Japan. Also I want to go back to Los Angeles someday.

Second, I could experience unique culture in America such as Black Friday and Undie Run. The Black Friday is special day to buy everything so cheap. The price amazed me. I think you can buy something at least half price. The quarterly Undie Run takes place during the Wednesday evening of Finals Week, when students run through the campus in their underwear of in skimpy costumes. This event is something completely unthinkable to Japanese.

I appreciate Japan by studying abroad and can live in comfort in Japan. But, I want to live in many different countries.

Finally I would like to be grateful to all the people who helped and supported me during study abroad.



Watching NBA game at LA



Universal Studio Hollywood



English class member

Findings through JUACEP

Name: Akira Tsuzuki

**Affiliation: Department of Computer Science and Engineering,
Graduate School of Engineering, Nagoya University**

Participated program: Medium (Autumn 2014 to Winter 2015)

Research theme: Level Set Method for Image Segmentation

Advisor at UCLA: Professor Stanley Osher

Affiliation: Department of Mathematics, UCLA



First of all, I would like to say my appreciation to everyone who has helped me. Professor Stanley Osher gave me such a great opportunity to study at UCLA. He is an authority on applied mathematics and it is a great honor to have studied under him. If he hadn't helped me, what I am today is totally different. Professor Jenn-Ming Yang at UCLA, Professor Noritsugu Umehara, Professor Yang Ju and Professor Yasumasa Ito at Nagoya University, who are coordinator of this program. Thank you very much for supporting me. Professor Shao-Liang Zhang, Professor Shinji Imahori, Professor Takafumi Miyata and Kobayashi-san of Zhang's Laboratory in Nagoya University, who always help me not only during this program but also before/after studying at UCLA. Thank you very much for kindly help.

6 months research at UCLA gives me various exciting experiences.

My study life at UCLA started in August, 2014. I was worried about doing research at the Department of Mathematics because I am engineering student who are not good at mathematics. And my worry has become a reality. Students and researchers of UCLA was excellent, and the difference of the knowledge with me was obvious. Under such circumstances, I studied with my labmates help. Without their help, I could not have completed my program. What I was most fascinated is the seminar of Prof. Osher. Many researcher both inside and outside of UCLA presented their research on the seminar.



At "The U.S.-Japan Alliance Conference"

Besides, I realized that UCLA is also the great organization in other fields. I was especially excited about having talked with Professor Jared Diamond, who is best known for his popular science book "Guns, Germs, and Steel"(awarded a Pulitzer Prize). Having talked with him, I was very happy as if I saw a movie star and I found again that UCLA is a great university.

Living with students from all over the world has also been an important part of my experience here. Campus life with UCLA students, who are not only non-Japanese students but also Japanese students studying at UCLA, has affected my future career.

I would like to express again my gratitude to JUACEP for providing me with this great opportunity. I believe this program is very useful for my future career.



Visiting headquarters of Intel Corporation



Watching a baseball game
at Dodger Stadium in Los Angeles

JUACEP REPORT

Name: Mamiko Sano

Affiliation (Dept & Univ.): Integrative Biology & Physiology in UCLA

Participated program: Short (summer) 2014

Advisor at UCLA/Univ. Michigan (Choose one): Prof. Amy Rowat

Research theme: Screening cells using 2-D depth filtration



Affiliation (Dept.): Integrative Biology & Physiology

I visited University of California, Los Angeles for two months and researched in Prof. Amy Rowat laboratory. The JUACEP program gave me great opportunities to experience a lot of things not only research but also daily life, culture and so on. Before leaving Japan, I was little nervous because I was not good at speaking English and it was first time to go to the US. In addition to that, I didn't know other JUACEP members. However I think it was good to take part in this program.

I was researching about the mechanical properties of living cells. At first, I had some trouble communicating with laboratory members because I couldn't speak English smoothly and couldn't understand what they say sometimes. But they were very kind for me none the less. They invited to lunch almost everyday and gave me a lot of advice or comments for my measurement and presentation. I think 2 months was too short to learn English, but this experiment motivated me to study English more in Japan. In laboratory, I was impressed with their approach to their experiments. They discuss the experiments of someone by everyone and they share even small information with laboratory members. In addition, they used their time effectively. They enjoyed their life. I'd like to imitate their way of life.

I could take part in the potluck party in laboratory twice. We brought some foods together and enjoyed eating and chatting. I brought *chirashi sushi* and lab members said that it was delicious. It was very fun and precious experience for me.

However I have one reflection point. That is to talk to a lot of people actively. I couldn't speak to people sometimes and I've relied on other JUACEP members. I think that to move from my own is important. I'd like to take advantage of this reflection.

I would like to express the deepest appreciation to Prof. Amy Rowat gives me constructive comments and encouragement. I gratefully appreciate to my family for their moral support and warm encouragements. Finally, I would like to express my gratitude to JUACEP for their financial support.



Lunch time with laboratory members



Watching baseball in dodger stadium



Farewell party with JUACEP members

Experience in UCLA

Name: Takuya Yamanouchi

Affiliation: Materials Science and Engineering Department,
Graduate School of Engineering, Nagoya University

Participated program: Short (summer) 2014

RESEARCH THEME: CERAMIC MATRIX COMPOSITE MADE BY CVI-
PROCESS

Advisor at UCLA/: Prof. Jenn-Ming Yang

Affiliation: Materials Science and Engineering Department, Henry
Samueli School of Engineering and Applied Science, UCLA



I had been UCLA as a researcher for two months. My supervisor was Prf. Jenn-Ming Yang and his Lab focuses on materials science. This research area is important for Aerospace industry and a lot of his students who were working for this lab are working for that kind of big company. And Prf. Yang is a coordinator of this program. He helped me so kindly to stay there. I really appreciate Prf. Yang for the opportunity to work under him.

UCLA is the university like we think "American University". They are powerful not only in studying and research but also in life things. And there are a wide variety of nationalities, such as Asia, Europe, America and so on. These students have many opportunities to communicate with each other. If you are in Japan, doing this kind of thing is not easy.

The biggest difference between Japan and US I had felt is people's vitality as I mentioned a little. They know how to have fun better than us. Even if they are working, they look like fun. In that atmosphere, I had had fun so much. There are a lot of places to visit, like Santa Monica beach, Hollywood and Baseball stadium. If you go far, National parks, San Francisco, Indy car race and Las Vegas are there. Everyplace was so excited for us. Additionally, also normal life in Westwood was impressive for me. Even though my English skill was poor, lab member had taken care of me so much. I can clearly remember even now about going to their house, watching stupid Japanese animation, doing card game, gym, racket ball, go-kart, diner, drinking at bar and their house and so on.



Throughout this program, I learned some precious things that I will never get in Japan. I'm pretty sure that had a great effect on my career and whole life.

And for your information, I had no idea how to speak English in person until last April. However, I had had precious experience as I showed you. So you don't need to worry about it. Additionally I totally recommend you to choose middle or long term. If I can go back to last March, I'll never choose short term.

Finally I would like to express my sincere gratitude to all of you who had helped me for providing me this precious opportunity. Best Wishes,

Unforgettable California Life Archive

Name: Kouhei Yamada

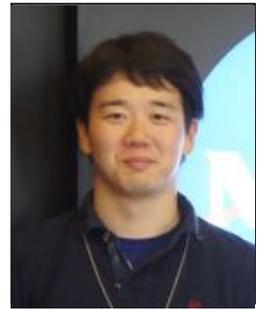
Affiliation: Aerospace Engineering, Nagoya University

Participated program: Short (Summer) 2014

Research theme: Experimental Investigation of Advanced Working Fluid
in a Flat Heat Pipe

Advisor at UCLA: Prof. Ivan Catton

Affiliation: Mechanical and Aerospace Engineering



“It is the most comfortable city to live in for Japanese in the world, except Japan.” Sometimes, Los Angeles is referred so. Exactly, the comfortable climate, friendly people, and many Japanese restaurants in California made my life comfortable as in Japan. However, my life in LA was much more excited than Japan. Even in daily affairs, I could discover something new for me. All events in these two months, going for dinner with my colleagues, discuss in English, drive through sunshiny highway along the coast, and present my work at Jet Propulsion Lab of NASA, were awesome. My best place in California is the shopping streets near the beach in Santa Monica. I often cycle there.

Of course, I felt and learned many things in such wonderful summer. Among those, I will talk about two stuffs in this article. First, what I felt in the lab was that students in US were good at thinking logically. For example, they were good at organizing some elements and solving problems when something was wrong with experimental stuffs. That way was very logical and reasonable. During study with Ph.D. students in UCLA, I learned not only scientific knowledge but also how to conduct study or experiments. Second, I was so impressed by the entertainments in United States. The show of “Cirque du Soleil” in Las Vegas and the baseball game in the Dodger stadium were also very excite. They try to excite the audiences without any breaks. I was overwhelmed to space shuttle “Endeavour” and plane carrier “Midway”. Through these experiments, I felt the national strength of the US. I think the United States is still the strongest country of the world. Of course, Great nature in US, such as Grand Canyon, Death Valley and Pacific Coast Highway, was also very attractive for me.

Based on the above, what I want to tell you is that we, Japanese, should have the global viewpoint and, for that, try to live in foreign country. From when I participated in this program, I came to think about “Japan in world”. Not only in UCLA but also in LA, there are many people come from various countries. In such environments, I could see the other country’s community with lively or vigorous. On the other hand, I felt that Japan come to fall from prominence gradually. Anyway, I am returning to the original story because the story is getting pump it up. Studying and living abroad brought me much more things than just traveling. Therefore, I suggest that you should use the program of studying abroad such as JUACEP!

