

FGL
Community

NEWSLETTER

Summer Edition



Official Logo!

FGL NEWSLETTER

Community

Welcome to the hot, hot summer edition of the FGL community Newsletter.

It is now time to open our doors to the Summer. Warm, sultry breeze will soon overtake the pleasant ones of the Spring blossoms. It is going to be one hot summer—Brace yourselves!

We, the FGL community, are very excited to present to you our second edition of our Newsletter. We bring to you some very refreshing interviews with our alumni, and three hot, current, and thought-provoking research by our very own seniors of the 4th year!

Waiting at the end of the tunnel are some diverting and enjoyable events organized by Tohoku University's own student body organizations.

We are nearing the end of this semester and understandably, this month might be stressful for most of us, what with all the tests assignments, projects, and reports that are due. But worry not, for if we pull through this, we are home-free! And in these times where we are forced to keep to ourselves physically, there is no issue with connecting to one another virtually. Reach out to one another to relieve the stress and we can make it through this together. The FGL family is always here for you, so feel free to call upon us!

「頑張って！ファイト！」 and 「お疲れさま」 in advance! Have a marvelous Summer and please stay safe and healthy.

Designed by Neo, Sarika, and Wei Wei.

Edited by Neo, Carlos, and Sarika.

Ideas by Yize, Alfi, Maulana, and the committees.



We have a new logo!

Of the total of 7 participants of FGL community logo contest, one winning logo has been chosen as the official logo of the community.

The logo designed by Germaine Lau was declared the winner! It imbibes the concept of a global community. The colorful globes represent the “Multicultural” character on a purple background that is the color of the University.

We have her [insights](#) on living in Sendai too!

What's in this newsletter?

Ask Senpai ([Page 3](#)):

3 Alumni interviewed!

Research Topics ([Page 7](#)):

3 Programs, 3 Seniors, 3 Researches, Come Find Out!

Information ([Page 10](#)):

Find Out More About Student Groups, And Course Overview for Future Students!



ASK SENPAI



As futuristic as this program's name sounds, many wonder what it would be like when one graduates from Tohoku University as an FGL student. This summer edition has interviewed 3 alumni that have graduated from Tohoku University. Interesting insights on living in Sendai and all about the job-hunting universe is explored!

ASK: Germaine Senpai

Germaine graduated from Tohoku University in 2017, and she is now living in Singapore.

Q Could you tell us a little bit about yourself? How are you doing? Hobbies?

A My full name is Germaine Lau Gek Khin. I am from Singapore. I was in the AMB program. And last year I just graduated with a Masters in Marine Life Sciences from the Tokyo University of Marine Science and Technology. I am currently doing job interviews and applying for jobs in Singapore. My hobbies are bouldering, bowling, and reading fiction stories.



Q How would you describe your 4-year stay in Sendai? Any insights on what you have learned during your life here?

A Thanks to the nature of the FGL program, I learned how to interact with many people of different cultures and backgrounds. My batch, the 3rd generation of the FGL program, was very closely knit and we would hang out together as much as possible. We would have gatherings in the dormitory common spaces and cook and share our food and culture. During our 3rd and 4th years, when everyone took their specialization courses in the various campuses, we would still hold dinner parties and celebrate birthdays together.

Eventually, I ended up learning a little of the Thai language just by listening to my Thai batch mates speak. It was immensely fun and I appreciate the time spent together. When we held FGL welcome parties to welcome the new juniors, the advice the seniors (we)

would give to our juniors would be to create strong bonds, as much as possible, during the first two years spent in Kawauchi campus together. You definitely won't regret it! I'm still in close contact with a few of my batch mates and we video call regularly!

At the same time when I look back at my time in Tohoku University, the bulk of my memories of University life is very closely linked to TUFSA. I am thankful that I decided to join and be part of a great team. That was where I was able to plan and execute

many events and activities during my time as treasurer and member in my 4 years. Of course, there were times where things got stressful, due to planning the Tohoku University International Festival (TUIF) whilst juggling my school work (and sometimes a part time job on the side), but it was all worth it when on the festival day everyone enjoyed the event. I am thankful to all the support staff at the International student office and our advisor Suematsu sensei for their help, support and patience with us. I wish that my juniors consider contributing to school life and creating

their own memories that they'll treasure.

Q Any advice/tips for current students on academic, and social aspects?

A My advice to current students? Study hard! But also, know when to play hard. Join clubs to experience campus life, treasure the time spent with your batch mates and plan trips around Tohoku region! It's so beautiful, so make the most of your time there! Hot springs, festivals in all seasons, nature, cuisine, tradition, nothing disappoints.



Tohoku University International Festival is held every year (except 2020 from Coronavirus.) You can also be part of the organizing team!

ASK SENPAI



ASK: Yiwen Senpai

Yiwen graduated from Tohoku University in 2017 (AMC program). She is now pursuing her PhD degree at the University of Oxford!

Q Could you tell us a little bit about yourself?

A My name is Yiwen Li, I am now conducting my PhD studies (3rd year) in Physical and Theoretical Chemistry at University of Oxford. My research focus is single-molecule imaging. I like traveling and photography. I mostly spend my holidays traveling around the world with my friends, my family, and my camera.

Q How did you describe your four year stay in Sendai? Any insight that you have learned during your life here?

A Those 4 years I spent at Tohoku University were glorious. Those years have turned a naïve homesick teenager into an adult who can think and solve problems independently and have the passions to explore any unknowns. Since that was the first time I studied abroad, it was particularly important for the university to support and train us in both academic and social life. I would say Tohoku University and AMC course have done a great job and I felt very thankful. Significantly, there were so many events, such as Hanami and Imonikai, aimed to expose us to Japanese cultures—it helped a lot, at least for me, to adapt to the life in a different country without fears.

Q Any advices/tips for current students on academic and social aspects?

A Generally, I would suggest the current students to attend more social events, since that would help them to learn more about Japanese cultures. This was not only about getting used to the life in Japan, it also helped cultivate one's way to see the world differently. Also, I would personally suggest taking any chances to do research. No matter which year they are in, I believe all labs in any courses at Tohoku University are always welcoming.

It is quite important to try as much as possible in the early academic year to find what you are really interested in, especially for those who want to continue to graduate studies.

Q What is your plan after graduating from your current university?

A I plan to stay in academia and focus on my research interests of single-molecule imaging. I haven't decided which country I will work in, but I don't think it will be a big problem for the experiences gained in both Japan and U.K.



ASK SENPAI



ASK: Van Senpai

Van graduated from the IMAC-U program in 2017, and received his Master's degree in 2019—That means he lived in Sendai for 6 years! He is now working for a company in the Kansai region.

Q Could you tell us a little bit about yourself. How are you doing? Hobbies?

A My full name is Songyot Piriyaikulkit, 25 years old from Thailand and enrolled in Tohoku University in October 2013. Currently, I am working for Sumitomo Electric Ltd in the Next-gen machinery R and D department. Mostly robot-related. I have pretty standard hobbies: drinking, driving (not after drinking, of course), and gaming.

Q How would you describe your 6-year stay in Sendai? Any insights that you have learned during your life here?

A “Good times.”

This city had everything I needed. There are not too many people, not too few, and easily accessible facilities. I wish I could've stayed there longer, but sadly there aren't too many job opportunities there. Not much insight I can give. Living in Sendai is already as easy as life will get for you. Even without basic level Japanese. I think the locals here are somewhat used to dealing with foreigners. Still, learning Japanese will make your life here a breeze. Also, get a driver license and you will unlock several spots accessible almost only by cars (e.g., Costco).

Q Any advice/tips for current students on academic, and social aspects?

A I'm not the top of my class academically so I believe my advice might not be what you are looking for (laugh). But for social aspects, Sendai has several communities, so getting to join one of those is kind of nice. Unless you are an introvert. We have all been helpless at some point after moving to Japan. So, don't be shy to ask for help!

[\(List of communities\)](#)

Q Any advice on career path and job hunting in Japan?

A I've never worked anywhere else besides Japan, and have only 1 year of work experience so far. So, I myself don't know much about career paths. As for job hunting, Japan job hunting is unique. Though I heard several corporations are trying to globalize their recruitment, but no significant change has occurred yet in my eyes. Japanese company recruiters look for different traits in candidates compared to any other countries. For starters, the fabled lifelong employment mindset still exists.



ASK SENPAI



Job Hunting in Japan

Songyot Piriyakulkit (Van)

“You are not applying for a ‘position’ but rather the ‘company’ itself”

When you apply for a job in a Japanese company, you are not applying for a “position” but rather the “company” itself. After you get hired, you will be labeled as a “new recruit”, undergo basic training, then assigned to a department. Unfortunately, it is not uncommon to get assigned to a different department from what you wished. A few of my colleagues cried on the department announcement day. I myself got assigned to a department not on my top 3 lists. Note that, even if you get assigned to your dream department, every employee is expected to rotate to a different department once every 3 years or so. Despite that, I’ve fit with the company culture surprisingly well. I’m having a good time working so far!

As mentioned above, you are applying for a company, not a job (unless you plan to quit in a couple of years). Learning the company culture is a must, for both getting hired itself and working there. If you don’t fit with the company culture, you are going to have a rather hard time. To do that, start researching and going to seminars, or get an internship. Going to seminars has more benefit than just learning about the company. There you can get acquainted with the recruiters. Even if you already have learned enough, keeping in touch with the recruiters will help you appeal to them as a candidate serious about joining.

After you have learned about the company and have made up your mind, fill up an entry sheet, submit it and hope for the best. Assuming that they like your entry sheet, you are expected to be interviewed 3 times or more. If you have any other companies, repeat the steps above.

Lastly, get used to answering some specific questions like “Is our company your No. 1 on the list?”. Show any doubt and you are out!

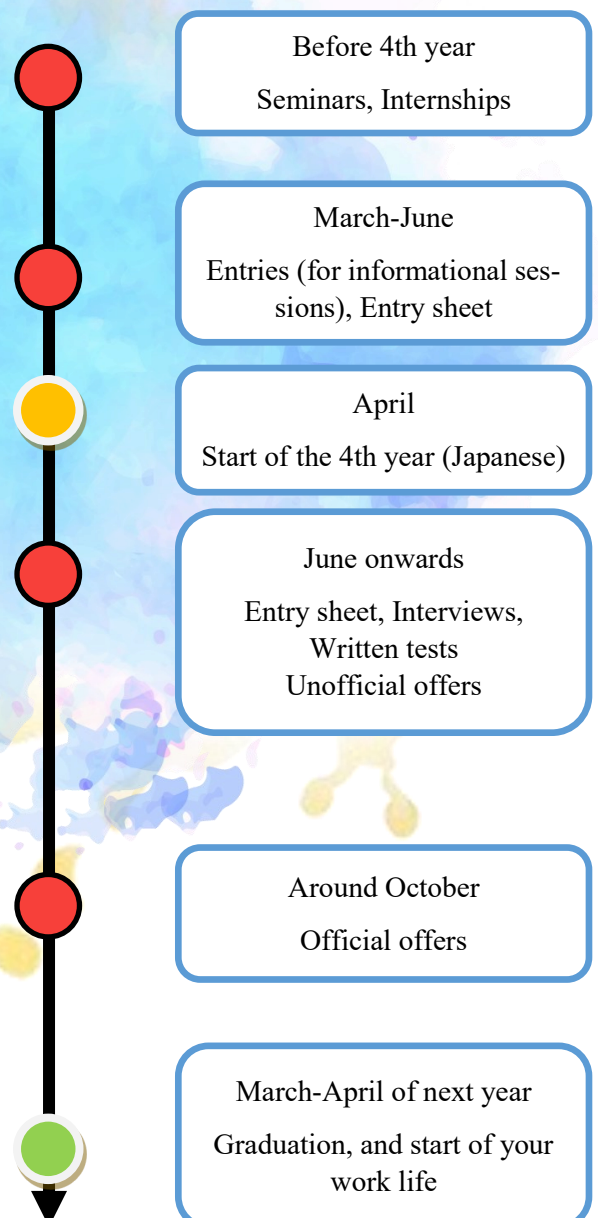
As FGL students usually graduates in September, we will have a half-year gap before starting job, so some decide to graduate early, take a break back home, or enter graduate program.

Job Hunting: A flow Chart

Traditionally, Job Hunting season (shūkatsu, 就活) starts right before the beginning of the last year of the degree, March—the academic year starts from April. It is also recommended that you join seminars and internships to know the culture before the season.

Many companies now requires you take the amplitude test made for job application, e.g., SPI3, and some also have their own tests in related subjects. Unless you are applying for a very international company, strong Japanese (N2 to N1) is usually required.

So if you want to work in Japan, be prepared.





RESEARCH TOPICS

Deep Learning-based Grasp Planning for Bin Picking Problem.

Adam Syammas Zaki. IMAC-U

As you may know that Japan is a country where its population is steadily decreasing over time, and will likely face a shortage of working labor in the future. To remedy this problem, Japan has invested its resources in automation. Unlike humans, robots do not get tired and can perform a task with high precision and accuracy, making it the perfect tool to do repetitive tasks. Even though automation has been around for decades, many industrial tasks still pose challenging problems for robots. And in this article, I would like to talk a bit about my research on pushing the boundary of automation.

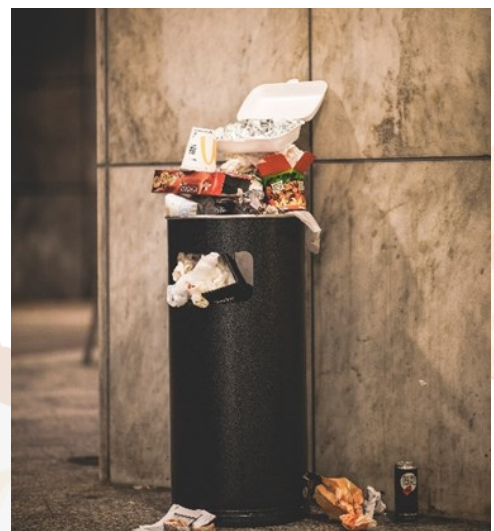


Until recently, robots have only been good at working in a structured, tightly controlled environment. For example, in a robotic picking system where the goal is to have a robot to pick and place an object, everything is designed to a specific condition. In an unstructured environment where obstacles constantly move or where the object may be in a random position and orientation, we need a more robust algorithm.

In the bin-picking task, the goal is to have a robot to recognize a randomly piled up objects and pick them individually until no object is left inside the bin. It seems trivial for us humans, but not so much for robots. In my thesis, I am incorporating a deep learning method to tackle this problem. For the last couple of years, we have seen a huge improvement in object recognition with deep learning methods. The only caveat is that deep learning is a data-driven method. So, the performance of the method relies heavily on both the quantity and the quality of data.

Gathering large data from experiments and manually labeling them would likely take forever. Instead, I am using both real data from experiments and synthetic data generated from a computer simulation. Using synthetic data allows me to use fewer real data from experiments, thus saving me time.

I believe that my research still has a long way to go to be applicable in the industrial world. And I think many things can be improved from the current state of the art in the automation field. I hope that more great young minds are interested to solve hard problems in the field of automation.



RESEARCH TOPICS



Chemical/biological analysis through micro-total-analysis-system

Zhou Xiang. AMC

All of you should be familiar with the scene that when you get some inflammation and go to hospital, the doctors always ask you to take a blood test so that they will figure out what is occurring in your body. So, have you ever thought about what information a drop of blood can give us? The answer is, almost everything. Blood glucose level, allergens, inflammation, cancer, and so on and so forth. However, these conventional bioassays usually cost a quite amount of money and time. Additionally, patients must go to the hospital for one single test. As the internet and communication technology develops rapidly, such as 5G, IoT, etc., a large demand of telemedicine systems or household healthcare systems have attracted attentions from a lot of scientists and engineers.



Our laboratory focuses on the development of high-throughput chemical/biological analyses by means of μ -TAS (micro-total analysis system), which is based on a micro device that conducts all necessary steps for chemical and biological analysis, such as sampling, filtration, chemical reaction, immunoreaction.

By using the micro total analysis system, we are able to reduce the scale of a whole laboratory to a small-size chip, namely lab-on-a-chip. Meanwhile, due to the reduction of size, it is also effective to decrease the volume of samples for one reaction or assay and to place the system close to the sample site (for example, at home) to realize onsite analysis. For the detection of different substances in blood, we use several detectable signals such as fluorescence, electric current, voltage, etc. to make every 'invisible' substance become 'visible', so that every pathogenic factor in blood can be detected rapidly and precisely.

In the near future, with the development of research on various diagnostic kits, with the collaboration with communication technology, we hope every family can achieve the household healthcare without the need of skilled technicians and we hope we can build a worldwide database to achieve all quick analyses online, especially during the epidemical period like COVID-19 pandemic, to save millions of lives.



RESEARCH TOPICS



Gene Expression level database with Bioinformatics

Chotinan Nikitpaiboon. AMB

What's your impression of people who study marine biology? Is it those who are taking care of fishes in the laboratory or those who go to the sea and dive to collect samples?

The answer is yes. But that does not cover every aspects of marine biology.

Unlike my AMB colleagues, you will not find me in either the laboratories or on sampling trips. My place is always at a seat in one corner of the student room, in front of a large computer screen. Such a picture might be common eyesight for anyone study engineering or computer science, but not here - in Faculty of Agriculture. Then the next question is probably: what are you doing here, in this major, using a computer?

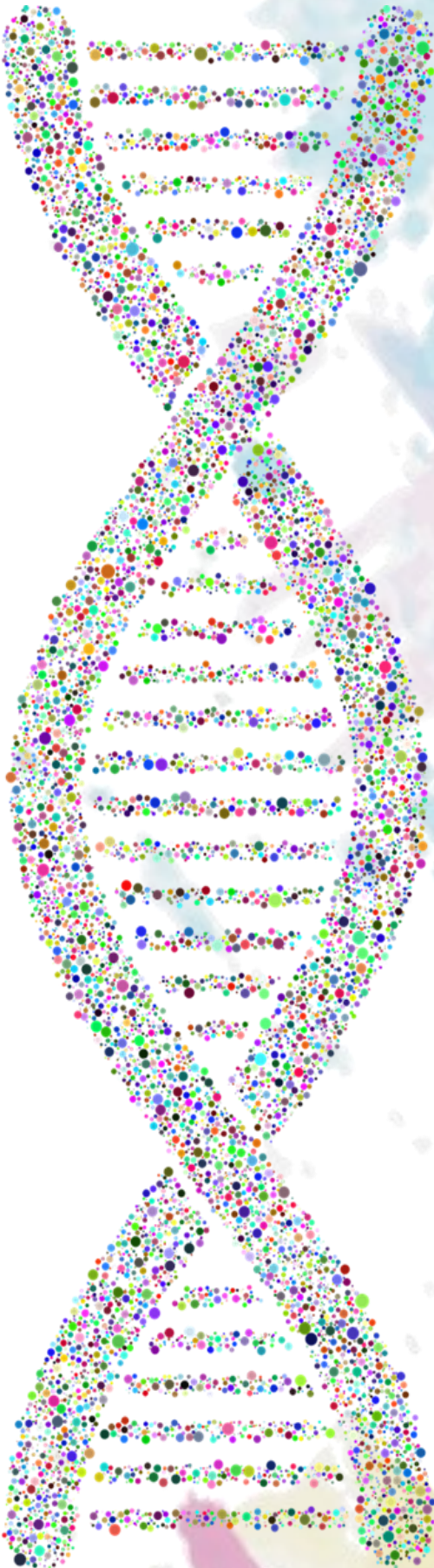
Have you ever heard of the term bioinformatics? In short, bioinformatics is a science field that uses, or even develops computer software to understand biological data. One of the well-known biological data is 'genome', all the information cells need to develop an individual.

To make it easier to imagine, let me put it this way. The size of the human genome is over 3 billion base pairs and about 20,000 genes exist within that. How could we going through each base pair again, and again, trying to extract information and analyze it manually with high accuracy without using any computational tools? Moreover, the structure of genome sequences is, amazingly, very algorithmic. If the basis of computer is consisted of two number, 0 and 1, then genome is based on four letters: A, T, C, and G. Using this concept, a ton of bioinformatics algorithm and program has been developed which has taken a big leap during the past ten years.

My project in the laboratory of Marine Genetics and Life Science is, in simple words, to build a database of 'gene expression level' in Japanese flounder, the main organism studied in the lab. Collecting data of gene expressions means that I have to extract information of how much each gene is expressed in different life stages or conditions and bring them together in one place. My colleagues can later look up my database to use as reference and make use of it in their projects.

Bioinformatics is not only limited to two-dimensional data; it could be three-dimensional too! For example, analysis of protein structure (which is 3D) or clinical image processing, using AI to help detecting defects which might be difficult to find using only human eyesight.

And that's how bioinformatics works! Today's world is driven by data and biology too! :)



INFORMATION



List of Communities in TU

Tohoku University STEM Student Network—TUSTEM.

TUSTEM is a group with a goal to strengthen the relationships between students in STEM-related courses. They have weekly dinner, language exchanges, group studies, and academic talks. ([More](#))

Tohoku University Foreign Student Association—TUFSA.

Established on November 3, 1965 TUFSA is a group of international students in Tohoku University that provides a platform for intercultural exchanges for both foreign and Japanese students. They also have regular parties, and an annually-held international festival with over 5,000 guests. ([More](#))

TEDxTohokuUniversity.

TEDxTohokuUniversity, is an individually organized branch of the famous TED talks. The aim is to share multidisciplinary innovations, ideas, and inspiring stories, and be the platform between the university and the local and global network through those ideas.

The next Talk is coming soon this year. ([More](#))

Admission guidelines

For students willing to apply to the course of next year, click [here](#) to find out the details and prepare yourself!

We hope to see you soon in Tohoku University!

Program Overview

Quick summary on when and what you will be doing during your 4-year life in FGL by our Senpai, HyoJae Chung! Available [here](#).

Pre-enrollment program for new FGL students

This program is made for the upcoming students to prepare for the new life at TU. The introduction sessions are completed in June with numerous participants. We hope to see you soon in the next sessions that include group studies, and Q&A.

Quick Note From The Leader

Here comes the end of this newsletter. I want to thank all the committee members for making this happen, Watanabe Sensei, for helpful information, Senpais, for inspirational insights and researches, and you—the readers—for keeping my passion driven.

During this unusual situation, I hope everyone stay safe and sound, study hard, and don't forget to enjoy your everyday life wherever you are.

See you in the Fall Edition!

Watcharawut (Neo)

Social Network

We have created social network accounts. Feel free to contact us anytime!

Facebook: [TU FGL Community](#)

Instagram: [fgl_community_tu](#)