

FGL COMMUNITY NEWSLETTER FALL 2021

And here we are again welcoming the season where warm colors-lovers rejoice, and long gone is the summer heat: it's finally fall!

As always, between the chilly air and reddish leaves, this also means that we are also officially welcoming our new FGL freshmen into Tohoku University! Although things have not been decided regarding your arrival in Japan, we wish that all of you stays safe, good luck! On the other hand, we would like to congratulate all of you recent graduates! Although times are hard, we are sure that you have proven your worth during your time in this university, we wish you success for your future ventures!

This edition, we are taking a look at the Japanese custom of maple viewing, a quick session with our favorite physics professor, the current situation with the pandemic, and we prepared a little game for all of you! Also, please look forward to the two very exciting announcements we have in this edition !

Enjoy the read!

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ASK SENSEI Takeshi Koike



Takeshi Koike is a professor specialized in particle physics. He is currently an instructor in general education physics for FGL students while conducting his researches. This interview will take a detailed look inside his background and his passion in teaching the subject.

Interview by: Rawin Wei Wei

BACKGROUND

I graduated from a high school in Japan, but then I decided to go to Washington, the United States to study physics. Since the time I left Japan in the Summer of 1990, I stayed with a host family; indeed, I stayed with them until I finished my undergraduate degree. First, I had to study intensive English for five months before matriculating in a community college in Washington state. Fortunately, my grades and English were good enough, so, after two years in that community college, I could transfer to the Department of Physics at the University of Washington. It took me three years since then to graduate from the university. While studying there, I could meet and befriend many other students from quite various backgrounds: refugees from wars in Asia, employees at Boeing, the rich from Hong Kong relocating to Canada during the handover, etc. The atmosphere there really opened my world as one of a few Japanese students there.

I took a year off coming back to Japan before going to the US again, but now I went to New York and pursued graduate degrees at Stony Brook University, another state university located 60 miles east of Manhattan. I stayed there for eight years, including one year as a postdoc. In the US, generally, graduate students do not pay the tuition, but they get stipends for working as TAs or researchers. I also got married when I was a graduate student. Afterward, I came to Sendai in 2004, living in the city until now. At first, I was mostly doing research using the accelerator. Besides, I had been more interested in teaching, so I joined the FGL program in 2017 as an instructor. That said, I have been teaching here only for four to five years.

Passion and goals for physics?

When I was young, I was sort of a philosophical boy who sought to discover the truths. In my junior high school, I was intrigued when my teacher mentioned special relativity, and that made me go to the library to find out what it is. Then it led me to realize what physics means: that physics is a study of nature. I was very surprised that such a subject exists, and I tried to read all the related books. That is how I had gained interest and motivation to study physics by the time I finished junior high school. Afterward, I have been very inclined to study the subject, and, looking back, I never regret my decision. I also consider studying physics a way that constantly trains someone to understand the scientific method.

Advice to aspiring physicists?

Physics is not about knowledge, yet it is about the procedure, we call the scientific method, and then for this process, you need to reason yourself. I believe that the final answer is not as important as the process you work on to get your results. It is important to follow the procedure: solve the problem, check the answer, and understand if you have made any mistake. Mistakes are invaluable information because they will point out what you have to improve and prepare you to solve real problems, which every so often we cannot check the final answers, unlike textbook problems. In real-life problems, we cannot check the solution, but at least we can illustrate that the process we use makes sense. This is just like the scientific method. Like what I did in the past, I did not aim to become a physicist; I just wanted to learn how to understand the truth, but that, somehow, also made me a physicist.

ASK SENSEI #2 Takeshi Koike

Lecture styles? Tests?

Interview by: Rawin and Wei Wei

After entering the FGL program to teach, it has only been 4 years. As a result, my lecture style is still evolving. Since there are many students with different educational backgrounds in FGL, I must modify the difficulty in case that some students who don't learn a lot in high school may fail the course and some students may feel bored as they already learned in the past.

In my course, what I want to do is explain the connection between different fields in physics. In physics, the difference between different fields is determined by humans. However, naturally, we can see the connection between different subjects. For example, you can see similar formulas between gravity and electrostatics.

Before the course, I will ask the student to read the textbook previously. This can give students basic understanding towards each chapter. In the course, what I mainly teach is the summary of my understanding. From my perspective, this can help students get deeper understanding in physics.

Regarding the test, it doesn't matter whether the grade is good or not. What matters is the procedure. By finding mistakes, you can improve your understanding in physics more. Also, during the test, you usually cannot refer to any materials. This means you need to think all by yourself. This is a chance to test whether you realize the concept or not. After all, the concept is the key to study physics.

Advice as a former student abroad?

Studying abroad is of course a life-changing experience. You can meet people from various backgrounds and broaden your horizon. Some of the experiences might be open-minded, and some of them might be beyond your imagination. In my case, when I studied in America, I saw the rich students who can buy a house directly and rent to other people. At the same time, I also had classmates that needed to do parttime jobs and sent money back to their countries, too. This made me understand how unfair the life of different people is and changed the meaning of "being normal" to me. What's more, the open society in the US differed a lot from Japan. After studying there, it is my first time to know what is called "homosexuality".

When studying abroad, I recommend you interact with as many people as you can. Regardless of their ages and backgrounds, it will be a very good experience.

Traveling guide?

To me, what I want to know is how people live. Instead of staying at a fancy hotel, I usually choose to stay at an inn that you share room with other people. This offers me an opportunity to chat with other people. Besides this, I tend to use local transportation such as bus or train to enjoy the landscape and view along the roads. Sometimes I don't even set a destination for my trip. I truly recommend you to do this for relaxing.



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Let them all be RED



In Japan, you have many chances to enjoy different activities in different seasons. Now, in autumn, we will be able to go out and watch stunning leaves turning red and brown, painting the forest and mountains in vibrant color. As we all know, Japan is famous for its four distinct and breathtaking seasons. Since the temperatures decline after the blistering summer, the colors of the leaves change into vibrant shades of orange, red, yellow, and brown.

Maple is one of the leaves that change color during this season. In Japanese, maple is called 紅葉(こう よ)(Kouyo) or (もみじ) (Momiji). The activity of searching for the most striking shades of leaf is known as 紅葉狩り(もみじがり)(Momijigari). There are numerous places in and around Sendai where you can visit the colorful decoration of the nature. One of the most famous place is 秋保大滝(あきうおおたき) (Akiuotaki). As you can see in the figure, there is a big waterfall. The height of this waterfall is about 55 meters, and the width of it is about 6 meters. The reddish maple around that waterfall is just stunning.

The best viewing time here is around late October to early November. Moreover, Akiuotaki is one of the three most famous waterfalls in Japan. In conclusion, different areas will have different best viewing times for maple viewing. Several other places such as Naruko Onsen and Yamadera in Yamagata prefecture are also easily accessible.

Thus, next time, if you want to view some breathtaking reddish view, just check the website like below in each year, https://www.google.com/amp/s/livejapan.com/en/article-a0002628/amp/, in order to make sure you go on the right time!

JPDATES

Update on coronavirus in Japan.

According to NHK news, more than 50 percent of Japan's total population has received their second dose of vaccination. As of September 13, approximately 63 percent (79.8 million people) have taken their first shot. The government is planning to ease restrictions for dining, drinking, events, and travel for those who show proof of vaccination and negative test results. <u>Source</u>

The emergency situation is lifted nation-wide since October 1, and Tohoku University's BCP level is reduced to 1, allowing face-to-face classes and activities with prevention measures. Please follow the University's <u>site</u> for updated information.

The coronavirus μ (Mu) variant.

This new type of virus has reached several countries in Europe from South America as of September 1st. This variant was first detected in Columbia as of January 2021 and has been classified as a "variant of interest" on August 26 by the European Centre for Disease Prevention and Control (ECDC). The Mu variant is being seriously monitored because of some evidence that might show a constellation of mutations that might increase its resistance to vaccine although further proof is needed. <u>Source</u>



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