

President's Address at the 2018 Saitama University Entrance Ceremony

The step to spring this year is faster than usual, and the soft fresh green of young leaves of trees in this campus shines in harmony in this morning, as if they congratulate you. This is just "Saitama University All in One Campus" and an embodiment of diversity.

Out of 666 new graduate students in total, the 89 of them are from 11 overseas countries. I would like to express a cordial welcome to all of you on this pleasant day with a full of hope. And I do respect you for continuing study under constrained condition. In addition, I sincerely express warm congratulations to your families who have given support to you.

Four years have passed since I was appointed as the SU President, and I have read addresses several times at the Graduate School's entrance and graduation ceremonies. According to the message from Professor T. Kajita, the 2015 Nobel Physics Prize winner, the university is an entrance to the scholarly activity and the graduate school is a place of scholarly activity on research basis. From this viewpoint, I have stated the following three remarks on research in my addresses: 1) Research is a repetition of challenge and failure aiming for a higher state, and an act that you cannot do without passion. 2) Vigorous curiosity, strong desire, sharp observation and depthful insight of researchers are indispensable for causing serendipity, which means a lucky instance or experience that happened accidentally. 3) It is important for researchers to rethink about the meaning of their researches and to raise awareness of the issues on social involvement of researches.

In connection with these remarks, let me introduce some ideas of intellectuals that could be suggestive for you who start research at the SU Graduate School. First of all, the science writer; Ms. M. Yoshinari's interview with Dr. James D. Watson, the 1962 winner of Nobel Prize in Physiology or Medicine for the elucidation of the double helix structure ("Reversal of Knowledge", NHK Publications 395, 2012).

He first points out that the current young people cover very restricted academic field: "It is important to have one's own idea discussed and criticized by others, while such time for others seems wasteful. The young people are nearsighted and seldom spend a time for learning outside their fields. It is partly due to the fact that the doctoral course has been supposed to produce technicians." In addition, he discusses about the difficulty of thinking thoroughly in the flood of information as follows. "Google, Wikipedia, etc. are great tools for easily getting information and accelerating science. However, it is necessary for us to ask ourselves whether the researches we are doing can truly change our thinking." Then he tells about finding the right problem: "I have been no longer need any professor since I spent a summer at Caltech at the end of my second year of graduate study. I decided to focus my research on DNA. There was nobody who advised me, and it was the result of reading. This decision was successful because I thought well, read well, and knew well. The motto in my graduate study was "to win with knowledge and judgment"."

The judgment requires flexible thinking. In addition, the knowledge is meaningful only when it leads to thought and action. In other words, according to Goethe's words, "Knowing is not enough; we must apply. Willing is not enough; we must do." Furthermore, "Thinking is more interesting than knowing, but less interesting than looking."

The next is a researcher on the evolution of the universe, Emeritus Prof. S. Ikeuchi, Nagoya University. In his book entitled "The way of thinking and learning in science" (Iwanami Shoten Publishers, 1996), he stated as follows: "For researchers, there seem to be roughly two types; differential type and integral type. Differential type is a type that thinks thoroughly the details of the problem with excellent technique. Integral type, on the other hand, is a type that looks at the problem from a broader perspective and thinks about the direction to go with the overall consistency. It may be said that the former is eye of insects and the latter is eye of birds. It is a truly capable researcher to have both eyes, but such a person is rare and many people seem to be inevitably biased toward either their best one." Prof. Ikeuchi continues, "I am the integral type and easily lose if I compete with the differential types, who are generally excellent in mathematical ability and intuition, and I feel it as a complex because I take time to think. I was worried about this, but I have realized that it is only a different path of thinking for each person." At SU Graduate School, it is important to occasionally look at your research from such a point of view. It will lead to encounter with research subjects and research styles that suit you.

Another topic is about scientists' confidence and pride, which are discussed by Prof. K. Washida, a philosopher and the President of Kyoto City University of Arts, and Prof. J. Yamagiwa, a famous gorilla researcher and the President of Kyoto University ("Thought on City And Nature", Shueisha, 2017). Prof. Yamagiwa points out, "Because production and consumption have to keep turning in a chain in the capitalism, with which natural science has started to cooperate, modern science has been working on new discoveries and inventions that support the chain. As a result, the science, which pursues a dream with the scientists' confidence and pride, has been brought down, and the meaningfulness of science has been changed to social usefulness." Prof. Washida responds, "Kant advocates public use of intelligence. He argues that the intellect is a talent, which happens to be gifted to oneself and should not be used on a private basis. The intelligence of mankind must be used for mankind, that leads to the scientists' confidence and pride."

Lastly, I introduce the words of SU alumni; Prof. T. Kajita, the Nobel Prize winner for the discovery of neutrino mass, and Prof. K. Komatsu, the 2016 Japan Cultural Merit for the research achievements on Yokai, that is specter. After graduating from Faculty of Science and Faculty of Liberal Arts, respectively, they continued their studies in the graduate schools. They say, "Please open up your eyes and heart widely to prepare for when you encounter important things such as research subjects." and "Research is a painful but pleasant puzzle. Please find the opportunity to open your way and to be active."

Research at graduate school has a high degree of freedom. I do want you to work furiously on your researches with out-of-the-box thinking by repeatedly challenging and failing to aim for higher states. At the same time, I hope each of you to gain confidence and pride as a researcher by refining not only knowing, but also thinking and judging with the eyes of insects and/or birds. I greatly expect your good research fight at Saitama University.

April 6, 2018

Hiroki Yamaguchi, Dr. Eng.
President, Saitama University