Congratulatory Remarks

First I must give an explanation here. It is nothing but unfortunate that this unprecedented graduation format where that attendees are reduced to a few representatives of the graduating student class, even if it is done to prevent the spread of the novel coronavirus. Knowing that you would like to attend this important event, your graduation ceremony, together with your friends, deciding this was a bitter dilemma. I will continue with my comments as if the entire graduating class was here for the ceremony.

I would like to offer my heartfelt congratulations to the 323 graduates of the master's program, most of whom are from the first class of the Graduate School of Science and Technology and to the 36 graduates of the doctoral program, which includes 2 graduates of the Graduate School of Science and Technology who are finishing their programs early and 1 graduate completing the program with the submission of a doctoral thesis. I would also like to extend these congratulations to their families who are able to see this day as well.

Also, on behalf of NAIST, I would like to express our gratitude to all the individuals and groups who have supported both the international and Japanese graduates in their studies and lives.

This is the 27th academic year since NAIST first accepted students and produced its first graduate. Including the graduates here today, NAIST has conferred 8,332 master's degrees and 1,701 doctoral degrees, including those who received their degree through submission of their doctoral thesis. At 10,033, the number of graduates has surpassed 10,000 and NAIST's growing network of graduates has reached a milestone this year.

This network is expanding throughout the world. Among today's graduates are 28 international students from 11 countries and regions, bringing the total number of NAIST graduates from overseas to 698 from 64 countries and regions.

Of the master's course graduates, some will continue their studies in the doctoral program to become researchers, and others will enter the workforce, starting new lives in society as professional researchers and engineers. Also, many of the doctoral course graduates will start their careers as professional researchers. How do you envision your future?

Currently, science and technology is facing an era of revolutionary changes. The keywords in science and technology for the past few years have been Internet of Things (IoT), Artificial Intelligence (AI) and Data Science, which are supported by the progress of ICT technology, both in software and hardware.

With these ICT technological innovations, research methodology throughout all fields has been reevaluated, and the influence of this in all science and technology fields has become prominent. Even if you only look at the core academic fields at NAIST for example, in the field of biological sciences the research area called bio-informatics has already been established, and the research area of materials informatics is attracting attention in the field of materials science.

It can be said that, in pursuit of a 'Super Smart Society' in which a myriad of things are connected to the internet fusing the 'real world' and the 'cyber world' and which is based upon analysis of huge amounts of real time-collected data that may be accessed from around the world through networks, a new research paradigm is developing called 'data-driven science' or 'AI-driven science.

This revolutionary age of science and technology will have great effects on society, and it is currently thought that, in the 2040's, the majority of the jobs existing today will disappear and new job types will appear, greatly changing the structure of industry. This means that many people will be faced with changing careers and, in some fields, this is already being seen.

In the 2040's you will be the central part of society.

So... let me ask all of you. What do you think will be required of you in the future? The following 4 attributes are often used in reference to researchers in science and technology.

- 1. A 'spirit of challenge' to cultivate new knowledge based on your own knowledge, creativity and research skills.
- 2. The 'well-roundedness' to grasp broad, comprehensive views of various compartmentalized knowledge.
- 3. 'Multi-disciplinary understanding' to produce new academic fields through cooperation and collaboration with researchers from various fields.
- 4. A 'global perspective' to strive to contribute beyond national borders, obtaining global recognition of your original research within the global science community.

These attributes, a 'spirit of challenge', 'Well-roundedness', 'Multi-disciplinary understanding' and a 'global perspective', do not solely apply to those who will undertake research. Regardless of your profession, I hope you lead the way to the next generation by actively pursuing future societal creations and developments as talented resources that can open new research fields by flexibly responding to societal changes through a holistic understanding across both humanities and science.

And for this, I believe it is important to have the spirit to 'take the first step' in any activity, to constantly maintain a sense of challenge and a pioneering spirit.

The establishment of the Graduate School of Science and Technology through the merging of the 3 graduate schools of Information Science, Biological Sciences and Materials Science was undertaken considering this era we are living in and what we will face.

At NAIST you have not only gained academic expertise in your respective fields, but also, through your thesis research, you have the valuable experiences through which you developed the ability to identify problems, explore and implement solutions to these problems, evaluate the outcomes, and write academic papers on the outcomes through discussions with people having various viewpoints.

While this experience may have presented you with difficulties at times, I am confident that the network you have created here, the 'kizuna' or individual ties you have made, will assure your future.

NAIST's role does not end with us sending you out into society. Rather, the NAIST faculty and staff consider our role as facilitating the building of strong relationships with alumni so that each and all of you will be able to actively approach new challenges and continue your creative lives in the remarkably developing science and technology and society.

Last year on Sunday Nov. 10, we held our Homecoming Day along with the annual Open Campus event and in cooperation with the alumni association a meeting was held for graduates and executive members to interact with each other, building ties and exchanging information and opinions. We were able to hear our graduates' memories of NAIST and what their expectations are for NAIST's future. This is to be an annual event held every year, so please return as role models for our students enrolled then.

Also, in addition to the alumni association activities, NAIST is strengthening its international network of graduates who are active around the globe through international satellite offices established in Indonesia and Thailand, and we hope that you actively participate in and assist our pursuits.

As I stated in the beginning of my comments, the world is currently facing the hardships caused by the appearance of the novel coronavirus. While we will more than likely be faced with more unpredictable hardships in the future, we must strive and overcome them. Every night opens up to the dawn. And for this, the spirit to 'take the first step' will always be called for.

Finally, I would like to conclude my message by saying that we look forward to your future success and continued achievements. Once again, congratulations on receiving your degrees today.

YOKOYA Naokazu President, Nara Institute of Science and Technology March 24, 2020