

# Homecoming lecture by astronaut Koichi Wakata

On November 24th (Tue.), 2009, a homecoming lecture was delivered by astronaut Koichi Wakata at the Ito Campus. Approximately 200 students and others involved with the university were present.

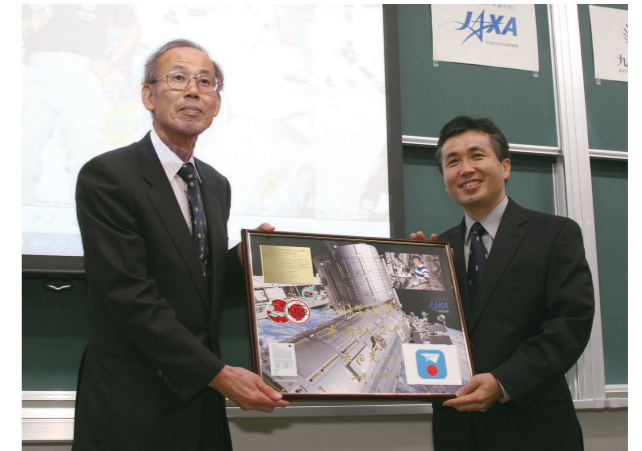


## Attendance at Kyushu University as part of a detailed blueprint to become an astronaut

Prior to the lecture, Dr. Wakata met with Yukitaka Murakami, the university trustee/vice president, at the Inamori Foundation Memorial Hall, and reported on the long-term mission of the International Space Station (ISS). At the end of the meeting, the university awarded Mr. Wakata the title of Visiting Professor.

Dr. Wakata was taught by Dr. Murakami when he was a student at Kyushu University, and this was the subject of the meeting that day. During that time, Dr. Murakami belonged to the Faculty of Engineering, Department of Mechanical Engineering, but he also lectured to students of Aerospace Engineering. Dr. Wakata studied material mechanics in 1984, elastic mechanics in '85 and material testing in '86 under Dr. Murakami. "Nine credits in all. I gave more credits to Dr. Wakata than any other teacher in the university. I contributed to his graduation," Dr. Murakami said.

From there, Dr. Wakata became interested in elastic mechanics and studied under the late Professor Seinosuke Sumi in graduate school. He completed his master's degree in 1989 and joined Japan

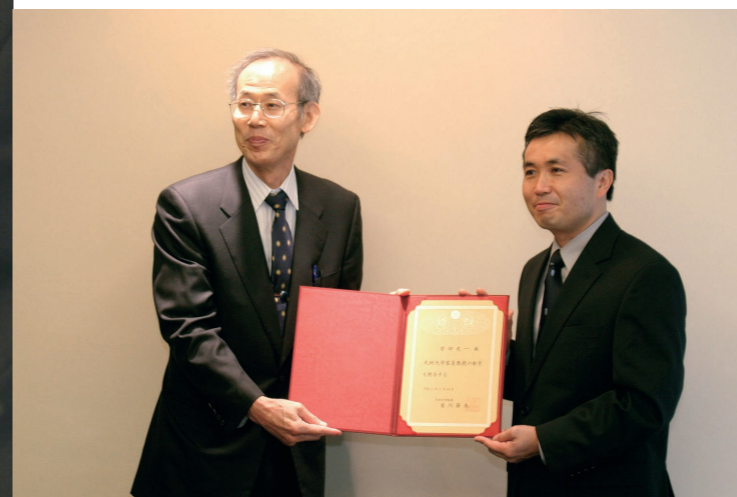


Airlines, where he was in charge of aircraft structural technology in the Systems Engineering Office, Engineering Department of the Maintenance Center in Narita. Only three years later, he was selected to be an astronaut. He was recruited to be an astronaut trainee by NASDA (National Space Development Agency of Japan) (now JAXA: Japan Aerospace Exploration Agency) for the assembly and operation of the ISS (International Space Station)/ Japanese Experiment Module "Kibo." The fact that he entered Kyushu University and then went on to graduate school seems to have formed a blueprint for him to become an astronaut.

Dr. Wakata cheerfully agrees, "I strongly feel that what I learned at university and graduate school was directly utilized when I worked in space."

## Japan's technology and teamwork condensed into "Kibo"

After the meeting, Dr. Wakata moved to Room 2307 in the second building of the center where students were waiting for his lecture. In this room, a transition ceremony was held to return a polo shirt with the Kyushu University logo that he wore as a part of his OFK (Official Flight Kit) during his long stay in space. The ceremony was followed by his homecoming lecture.



This polo shirt stayed in space for four and a half months with Dr. Wakata, and he was wearing it during live communication between Dr. Wakata and the students of Kyushu University in March 2009. He said that the space station smells like a factory, and the shirt still had that smell.

In his lecture, he used a DVD and Power Point presentation to explain how Kibo was assembled using robotic arms. He also discussed a variety of experiments (including materials experiments), presented beautiful and impressive images of earth taken from space and described what living on a space station with other astronauts is like.

The ISS is a project that was constructed and is operated in cooperation with 15 countries, including Japan. It is 110 meters wide and 75 meters long. It is large enough to hold a football field.



Dr. Wakata completed installing the external experiment facilities of Japanese Experiment Module “Kibo” on the ISS during his stay in space, which was the culmination of a 24 year process to complete Kibo. This is a great achievement not only for aerospace development in Japan, but for mankind as well.

In Kibo, various experiments and operations were conducted using a range of instruments. Experiments



included a crystal growth experiment, material experiments for the development of materials for efficient solar batteries, an experiment to estimate the effects of zero gravity on our consciousness in space, an experiment based on artistic themes and an experiment selected by the general public. Another experiment concerned new drug development for the new (H1N1) flu. Dr. Wakata reported, “By growing protein crystals using microgravity in the cultivation equipment on Kibo, we got very good results that should help lead to the development of specific agents.”

Starting with the early astronauts, Mamoru Mori and Takao Doi, there are currently six astronauts in Japan, including Koichi Wakata, Chiaki Mukai, Soichi Noguchi, Satoshi Furukawa, Naoko Yamazaki and Akihiko Hoshide. Candidates including Kimiya Yui, Takuya Onishi and Norishige Kanai are now undergoing training at NASA. Opportunities for Japanese astronauts seem to be greater than ever.

Dr. Wakata said that, after implementing various complicated missions, he realized how advanced the

Japanese technology condensed in Kibo is. He also said that Japanese ground controllers were excellent.

Students were inspired by Dr. Wakata’s impassioned lecture, and asked interesting and detailed questions. Questions ranged from philosophical questions to questions related to feelings and physical conditions in zero gravity:

“What is the meaning of space?”

“If I have poor eyesight or have a cavity, could I still become an astronaut?”

“Did you feel any sense of burnout or letdown after achieving such an important mission?”

Answering the question about the “meaning of space,” Dr. Wakata replied, “As a person who has experienced life in space, I think that reality is not only what we can see. There may be some sort of invisible existence. I feel that space gives us the ability to dream about such things forever. Humbly solving problems one by one based on an idea of what we don’t know, and activities to gain new insights could bring us



happiness and fulfillment.” He concluded by saying, “The time you spend here at school is very precious. Your classes are the key to improving your studies. Since professors prepare for each class taking at least three times as much as you do, you should listen to them carefully and make the class content completely your own. Take advantage of your acquired skills not only in space but every field, and try to establish international careers. Go for it together.”

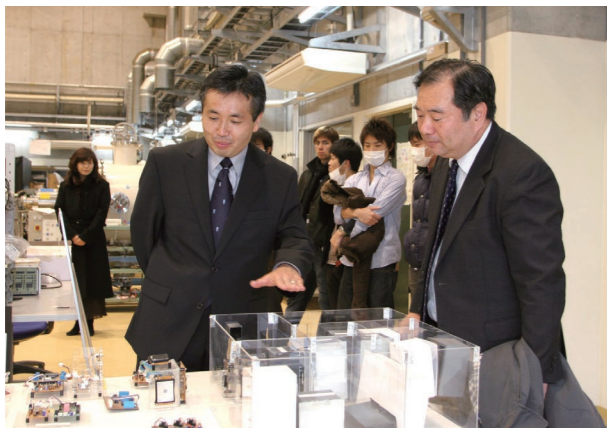
After the lecture, Noriko Ishii, a first year Master’s course student in the Graduate School of Engineering

who communicated live with Dr. Wakata in March, presented a bottle of Kyudai’s brand Imokyu, an authentic spirit made from sweet potatoes, to thank him for the lecture. The lecture was completed with applause from the students.

Since the lecture was transmitted simultaneously to the Hakozaki Campus and the Chikushi Campus using the distance lecture system, many students there could listen as well. This lecture was also transmitted to mobile devices by One Segment digital broadcasting.

## Dr. Wakata visits aeronautical engineering facilities

After finishing his lecture, Dr. Wakata walked around the Center Zone and visited the research facilities in the Center for Advanced Aerospace Engineering. He praised the facilities and said “this is an excellent place for the students of Kyushu University to study.”



Many junior fellows met him in the building and were able to pose for photographs with him. Dr. Wakata answered questions related to engineering from them respectfully and said, “As a visiting professor of this university, I am happy to talk about my experiences in space.”



# The Power of Dreams

**-If you keep your dream alive, the dream will come true.-**

**Yukitaka Murakami** | Trustee/Vice President

Do you have a dream? Not the dreams you have when you sleep, or those you may have in a classroom, but a dream you hope will be realized in the future.

Dr. Wakata often writes the words “Pursue Your Dream” on colored paper to present to children. The reason why he could become an astronaut is that he himself has been pursuing his own dream. Since dreams run fast, it is not easy to win a race to catch a dream. Why did he win the race? I realized the answer after some thought. I happened to be a part of the moment when he was a student. He pursued his dream enthusiastically and with a pure mind. He had the perseverance, innocence and cheer that characterize a person who is pursuing a dream.

### A strange question

In 1980, I was serving in a position at Northwestern University, located outside Chicago in the U.S., as a visiting professor for about 1 year. In connection with that, I was asked to act as host to the famous Professor Boley when he came to Fukuoka. Prof. Boley had been dean of the Faculty of Engineering for about 20 years. His visit was 20 years ago.

When he visited Fukuoka, Prof. Boley delivered a lecture in his field at Kyushu University, and then a social gathering was held at a hotel in Tenjin, Fukuoka in the evening. Six master’s students participated in that event, which was very rare. They were studying aerospace engineering in the laboratory of Prof. Seinosuke Sumi, the late professor of the Faculty of Engineering. It was Prof. Sumi’s generosity that allowed young students to participate in such a gathering, one that included a famous foreign professor. One of the students was a young

Koichi Wakata. He must have enjoyed the experience.

Prof. Boley came to Japan with his daughter who, unlike her father, was a specialist in classical Greek literature. I remember that she was a lecturer in language at a university. A day after the event, she said to me, “Yesterday, one student said something strange. He asked me very seriously what he had to do to become an astronaut.” She smiled and said, “I didn’t know how to respond.” I thought that the question was just another off the wall question, and the student just seemed to have asked the question to anyone. I only realized later that the student was Mr. Wakata.

### Supporting point of dream

I think this story pretty much typifies Dr. Wakata’s characteristics. He was an honest man, which was why he could ask such a question. He himself has pursued his own dream, and so he often says “pursue your dream” to others. If we keep our dreams alive, great things will happen. He shows us the truth of this by example. There are increasing numbers of young people who want to study at Kyushu University just because Dr. Wakata graduated from here. So his dream becomes part of a larger dream. He appropriately said in today’s homecoming lecture, “Classes are the key to improving your studies. Make the class content completely your own.” Time spent in class occupies most of a student’s life and is very precious. Do not attend a class without aim, but with keen interest. Pursue and achieve your own dream. We will give you our full support.

Reference: “How to Raise a Genius” (Asahi.com Education), by Dr. Wakata’s mother, is a good start to understanding more about Koichi Wakata.