

PREFACE

This is a record of the Japan Visit. The Japan Visit is an exchange program between Uzbekistan and Japan supported with a grant from the Japan-Asia Youth Exchange in Science Program of the Japan Science and Technology Agency. In cooperation with the Uzbek-Japan Center, the Takeda Foundation invited 11 Uzbek youth, and provided them with opportunities to learn about Japan's cutting-edge technologies and innovation. The Uzbek-Japan Center solicited and selected youth for the exchange program, and the Takeda Foundation facilitated the exchange in Japan.

The exchange involved visiting research laboratories of leading universities in Japan (Tohoku University, the University of Tokyo, and Digital Hollywood University) to witness the on-going development of innovative technologies; visiting the National Museum of Emerging Science and Innovation to learn about robotics; and visiting the Museum of Maritime Science to learn about the importance of the surrounding Ocean as source of aquatic resource. They also visited a regional open innovation laboratory, "the Kashiwa Open Innovation Laboratory" to study university-private company collaboration. The exchange was taken place from July 26 to August 3, 2016.

Promoting science and technology is a key engine for materializing a bright future for Asia. Therefore, it is vitally important to enhance the exchange of youth in Asian countries and Japan who will play a crucial role in the fields of science and technology. Uzbekistan has been promoting innovation based on the development of new technologies in order to develop a robust economy without too much dependence on natural resources. We believe that the experience the exchange youth have gained from this program will contribute to the development of human resources in science and technology and innovation in Uzbekistan.

Norio Ohto
Senior Managing Director
The Takeda Foundation

JULY 26 ARRIVING JAPAN

The 11 participants of the Japan Visit left Tashkent International Airport on July 25, and they arrived as scheduled at the Terminal 1 at Narita International Airport. They met pick up persons from a tour company at the exit of the Arrival Lobby, and were led to Keisei Narita Station. They took Keisei Sky Liner, and arrived at Keisei Ueno Station as scheduled. They met the Foundation staff (Mrs. Miyajima & Mr. Ohto) at the station, and together they all went to the Hotel Forest Hongo. Despite it being their first visit to Japan, the arrival was smooth and without trouble.



The Hotel Forest Hongo
6-16-4 Hongo, Bunkyo-ku, Tokyo,
113-0033 Japan

The group received orientation for the coming events by the Foundation staff.



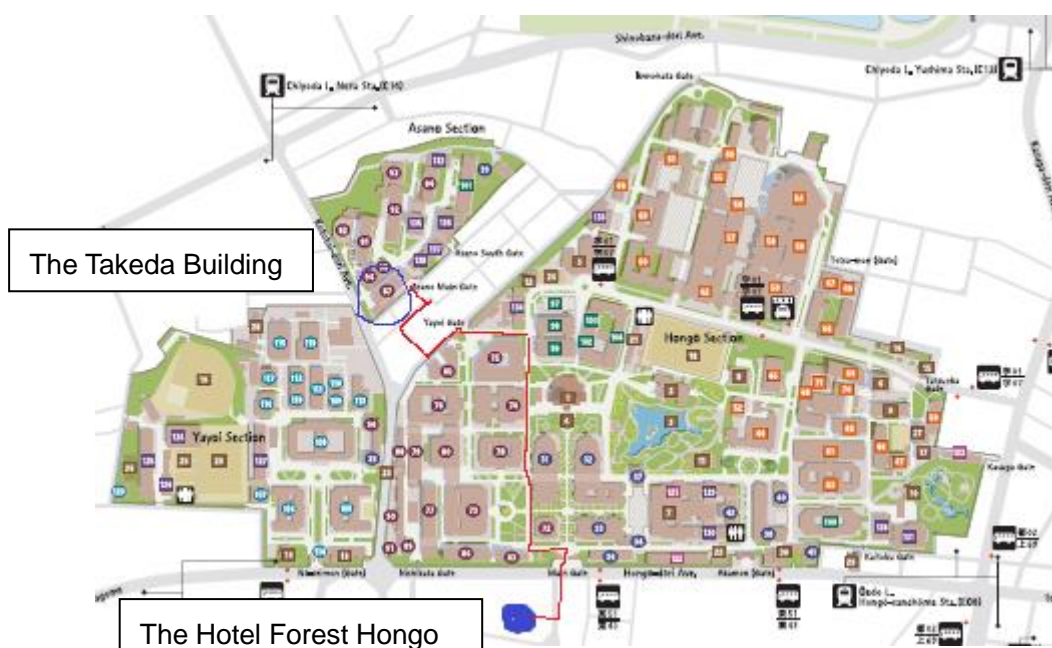
Orientation at a meeting room in the Takeda Building

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After orientation, the group attended a welcome dinner at Matsumotono restaurant on the Hongo campus.



Welcoming statement by Chairman Karatsu, and happy participants.



JULY 27 VISITING TOHOKU UNIVERSITY



Aobayama Campus

Tohoku University is located in Sendai, about 350 km north of Tokyo. It was established in 1907, the third oldest national university in Japan. The University holds about 3200 faculty, 11,000 undergraduates and 6,800 graduate students. The University has a good reputation for its research and education in electric and electronic engineering. The group took a bullet train from Tokyo to Sendai, and could enjoy beautiful scenery of the Japan countryside. They arrived at Sendai JR station at about 10 AM and took a subway from the Sendai JR station to the University campus.

After an early lunch at the university cafeteria, the group took advantage of visiting laboratories in the open campus day.



Robotics demonstration



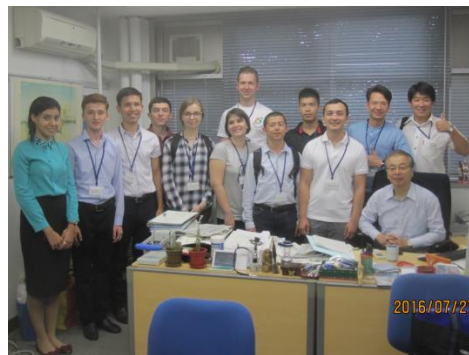
Dance with a robot

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During the afternoon, the group visited the Kuwano laboratory of the Informative Nanosystems, Division of Nanosystems, Department of Robotics, School of Engineering. The laboratory studies micro/nano sensors and micro energy systems aiming at the realization of an environmentally friendly, highly energy efficient society that utilizes sensor networks. At the Kuwano lab, a graduate student, Ms. Sana Talmoudi explained the development of a road infrastructure evaluation system. The system can collect vast amounts of data using drive recorders, and evaluate the levels of damages by analyzing the data. The system has been co-developed with a venture company, “toor”. Another graduate student, Mr. Nguyen Hoang Hung explained his research on an energy harvester.



Exchange with graduate students, Ms.Sana Talmoudi from Tunisia and Mr. Nguyen Hoang Hung from Vietnam.



With Professor Kuwano

JULY 28 VISITING THE MUSEUM OF MARITIME SCIENCE AND THE NATIONAL MUSEUM OF EMERGING SCIENCE AND INNOVATION



In the morning of July 28, the group visited the Museum of Maritime Science (MMS). MMS was established in Odaiba, Tokyo in 1974, in order to promote understanding of the importance of maritime science, ocean development and maritime security. The museum building is modelled after the British ocean liner “Queen Elizabeth 2”. At MMS, the group learned the importance of the surrounding Ocean as source of aquatic resource, and also a history of the first Antarctic research ship, Soya

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Studying the Exclusive Economic Zone



In front of the Antarctic research ship, Soya

In the afternoon, the group visited the National Museum of Emerging Science and Innovation (NMESI)



The National Museum of Emerging Science and Innovation (NMESI) was opened in 2001 to introduce cutting-edge science and technology to society, and to acquire feed back the society's response and comments on science and technology for researchers. NMESI has multilingual interpreters who explain the



exhibitions to visitors. At NMESI, the group studied the background and emerging technologies realized in various robots including ASIMO and humanoid robots. ASIMO is a humanoid robot designed and developed by Honda. It is 130 cm tall and weighs 50kg. It can walk and run on two feet, and kick a football to the net. It can detect the movement of multiple objects with two camera eyes in its head, and determine distance and direction. It can respond to questions verbally in different languages and can recognize different faces and address people by name. The museum also exhibits

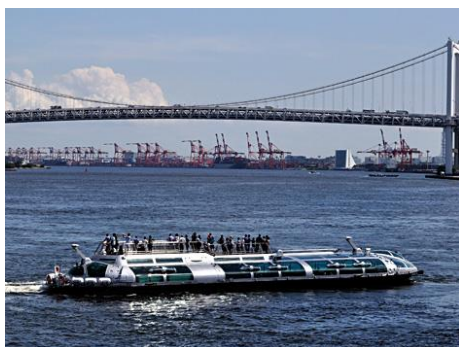
humanoid robots who look like humans and talk like humans.



Some of them enjoyed riding a new vehicle, UNI-CUB. UNI-CUB is a personal mobility device that was developed based on the balance-control technology used for ASIMO. It is a new device—both a vehicle and a robot. UNI-CUB embodies the concept of harmony between the people riding it and the people

walking by in an indoor space.

On their way back to the hotel, the group took a water boat to Asakusa



Tokyo Water Cruise bus

July 29 Visiting VDEC, Todai Entrepreneur Dojo of the University of Tokyo and a start-up company, AgIC.

VLSI Design and Education Center (VDEC) was established in 1996 as an intellectual education center on VLSI (very large scale integration) technology. VDEC aims at improving instruction on VLSI, and supporting VLSI chip fabrication for national universities, public and private universities, and colleges in Japan. VDEC distributes VLSI design information, provides CAD software and licenses, and supports chip fabrication.



In the morning of July 29, the group visited VDEC and received a lecture about a history and functions of VDEC by Associate Professor Mita.

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In front of a picture of the late Dr. Takeda, the donor of the Takeda Building to the University of Tokyo



At the Director's office with Professor Asada

Todai Entrepreneur Dojo (the University of Tokyo Entrepreneur training school) is a program established in 2005, for the education in entrepreneurship for the university students. Both undergraduate and graduate students can learn how to commercialize their ideas and inventions. Every year the program organizes business plan competition, and almost one thousand students participate in the competition. At Todai Entrepreneur Dojo, the group studied its unique program of entrepreneurship education.



At Todai Entrepreneur Dojo with Professor Hasegawa and students

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Electric circuit printed out
on regular paper



With President and CEO Shimizu
at AgIC

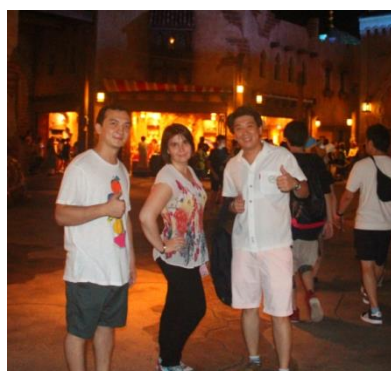
After Todai Entrepreneur Dojo, the group visited one of the University of Tokyo spin out companies, AgIC. AgIC was founded by an alumnus of the University of Tokyo in 2014. AgIC is named after Silver Ink Circuit (Ag is the chemical symbol of silver). They have developed and now are providing products with silver conductive inks. Using their technology, you can print out electric circuits on paper using a regular ink-jet printer.

JULY 30 & 31 EXPLORATION OF JAPANESE CULTURE

The weekend was assigned for free activity for the group. The group visited traditional spots including Ueno, Shibuya, and Disney Land.



Asakusa



Tokyo Disneyland

During the weekend, the group was not accompanied by the Foundation staff. What the Foundation staff were most concerned about was whether some of the group members would get lost or be involved in an accident. Fortunately There were no problems.

AUGUST 01 VISITING KASHIWANOHA OPEN INNOVATION LAB (KOIL) .



KOIL is located on the Kashiwanoha campus 20km away from Tokyo Metropolitan Area. KOIL offers space for the creation of new ideas by bringing together people with different background, cutting-edge information, and business creativity. They have networks with venture support specialists and entrepreneurs from inside Japan and abroad thus leading to the cultivation of new business and fields and research areas.

The group learned ongoing innovation development including Cybernics from Professor Kenji Suzuki of Tsukuba University. The Suzuki lab of Tsukuba University studies Cybernics, a new domain in the interdisciplinary academic field of human-assistive technology to enhance, strengthen, and support limited cognitive and physical capabilities. In Cybernics, several wearable or modular devices are used in order to study behavior and affective measurements based on augmented human technology.



With Professor Kenji Suzuki (center) and Mr. Masaru Murai, a designer of KOIL (right corner)

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The group also learned a new user interface, aero TAP with which you can operate your computer without keyboard or mouse. You can interact devices by displaying the palm of your hand toward the webcam. aero TAP works with any existing application and it does not require additional development skill.



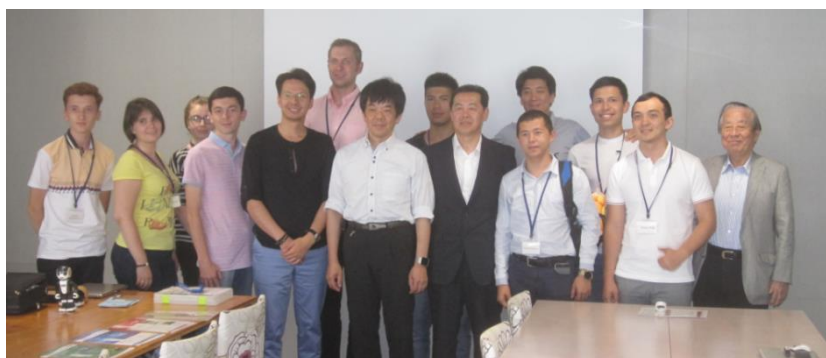
Lecture about aero Tap by Mr.Taisuke Sakamoto, Chairman of nexEDGE

During the afternoon, the group discussed innovation with Mr. Godo Irukayam. He developed the first groupware, LANWORLD, in 1988, and 2,000 companies have adopted the software. Groupware is a program that enables the sharing of schedules and tasks among members of a company. He also developed the first



mobile computing program in 1991. He joined NTT docomo and developed a well-known personal digital assistant, "sigmarion" in 2001, as well as smart watch, WRISTOMO in 2003. He left NTT docomo in 2013, and established his own research lab.

WRISTOMO



With Mr. Irukayam (center), Mr. Sakamoto of nextEDGE, and Mr. Murai

AUGUST 02 VISITING DIGITAL HOLLYWOOD UNIVERSITY (DHU)

DHU is a unique university that teaches the multiple specialized domains of visual imaging, 3DCG, animation, games, programming, and graphic design. At DHU, Mr. Tomoyuki Sugiyama, President of DHU explained the missions and policies of DHU.



With Mr. Sugiyama (the third person from left)



Sola City building that accommodates DHU

During the afternoon, two alumni, Mr. Erpan Yah and Mr. Takahiro Ishiyama explained their projects.

Mr. Erpan Yah is from the Hsinchiang Uighur Autonomous Region, China. In this region, it is becoming more and more difficult to transfer ethnic culture from generation to generation. Mr. Yah opened a short course in anime production in the region, and taught young Ughur students production techniques of Japanese anime. They were able to produce ethnic anime to transfer their culture.



With Mr. Erpan Yah

Mr. Takahiro Ishiyama is a board member of the internet service company, SIROK. He studied application software when he was a DHU student, and he

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and his friends developed a new application software, “My365”. My365 was a great hit and was downloaded 5000 times in 5 days. They transferred My365 to a cyberagent, and were interested in business in internet service. After graduating from DHU, they established an internet service company, SIROK. Their mission is to support the growth hack business, and they have produced developer support tool software, Growthbeat and Growthpush, that help application developers design and develop new application software.



With Mr.Takahiro Ishiyama

After DHU, the group returned to the Takeda Building for a summing up meeting with the Foundation staff



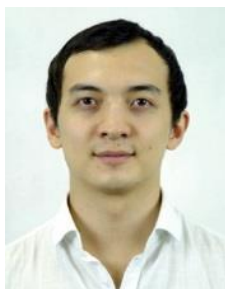
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Farewell Party at a Faculty House restaurant. Mr. Yukio Ishida, former Co-Director of the Uzbekistan-Japan Center, also joined the party.

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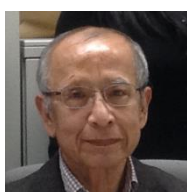
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Osamu Karatsu
Chairman
The Takeda Foundation