



Swiss Federal
Institute of
Technology Zürich
(ETH Zürich)



The University of
Tokyo

Project to Establish
a Strategic Partnership

Foreword

With the aim of promoting academic and student exchanges, the University of Tokyo (UTokyo) aims to establish a strategic partnership with the Swiss Federal Institute of Technology Zürich (ETH Zürich) in cooperation with School of Science, School of Engineering, Graduate School of Information Science and Technology and International Center for Elementary Particle Physics.

This strategic partnership project will be implemented as a part of the project, “Constructing a Global Campus Model at UTokyo,” inaugurated in FY2014.

The University of Tokyo and ETH Zürich already have a history of interaction between researchers through activities such as joint researches, symposiums and student exchanges. Through this project, we intend to expand systematic academic exchanges between the two institutions over an even wider range of disciplines.

Constructing a Global Campus Model at UTokyo

This project adopted as a “Top Global University Project” of the Ministry of Education, Culture, Sports, Science and Technology is comprised of the following three pillars:

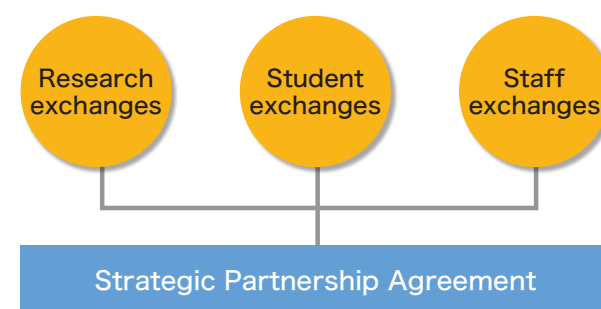
1. Establishment of strategic partnerships for the development of close, creative and cooperative relationships between our university as a whole and the top universities in the world
2. Radical strengthening of educational capabilities and comprehensive reform of education to respond to internationalization
3. Establishment of a core platform for the enhancement and integration of international collaboration

We aim to design a Global Campus model during the ten years leading up to FY2023.

About the Project to Establish a Strategic Partnership

The strategic partnership is a close, creative and flexible cooperative relationship between our university as a whole and a limited number of partner universities. It is built by utilizing our mutual strengths. This is a new inter-university relationship that takes a step beyond the conventional academic exchange agreements with overseas universities. The aim of the partnership is to carry out a variety of collaborative projects and exchanges of academic staff and students. The realization of such actions matches the circumstances and hopes of both sides based on the ties established through joint research in leading fields. The University of Tokyo already has a strategic partnership with Princeton University, and has decided to establish new partnerships with eight other universities including ETH Zürich.

With the focus on young researchers, the aim of this project is to work together to promote collaborative projects and open up the frontiers of academic investigation through activities such as exchanging researchers and organizing symposiums. In addition, we also foster global scientific human resources capable of engaging in activities on an international level by promoting further exchanges between students. As well as this, we promote exchanges between staff members with the aim of enhancing ties between offices to support academic and student exchanges.



The University of Tokyo has been conducting academic exchanges with the Swiss Federal Institute of Technology Zürich (ETH Zürich) on more than 10 joint research projects mainly in the field of natural science. Especially in the Department of Chemistry of School of Science, researchers interact across a broad range of fields such as physical chemistry, inorganic chemistry and organic chemistry.

Also, research and student exchanges have been conducted in the Department of Chemical System Engineering and the Department of Architecture in School of Engineering, as well as the Graduate School of Information Science and Technology and the International Center for Elementary Particle Physics. In addition, the University of Tokyo and ETH Zürich are both members of the International Alliance of Research Universities (IARU), an international federation of research universities, and actively interact with each other.

Building a Comprehensive, Close, Cooperative Relationship



- School of Science
- School of Engineering
- Graduate School of Information Science and Technology
- International Center for Elementary Particle Physics

About the Four Organizations of the University of Tokyo

The science and technology organizations of the University of Tokyo cover disciplines ranked among the top ten universities around the world. Their Nobel Laureates include Leo Esaki, Masatoshi Koshiba, Eiichi Negishi, Yoichiro Nanbu. In 2015, Prof. Takaaki Kajita was awarded the Nobel Prize in Physics based on the discovery of neutrino oscillations.



- Department of Physics (D-PHYS)
- Department of Chemistry and Applied Biosciences (D-CHAB)
- Department of Biology (D-BIOL)
- Department of Earth Sciences (D-ERDW)
- Department of Computer Science (D-INFK)
- Department of Materials (D-MATL)
- Department of Architecture (D-ARCH)
- Department of Civil, Environmental and Geomatic Engineering (D-BAUG)

About Swiss Federal Institute of Technology Zürich

ETH Zürich is a leading university in Switzerland and has 16 departments which cover a broad range of fields in science and engineering. It is one of the top universities in the world which has produced 21 Nobel laureates including Albert Einstein.

Student exchanges

Research exchanges

Revision of the Inter-University Agreement

With the agreement of the School of Science, the School of Engineering, the Graduate School of Information Science and Technology, the International Center for Elementary Particle Physics, the School of Economics, the Graduate School of Frontier Sciences and the School of Agriculture and Life Sciences, the Strategic Partnership Agreement was signed by Prof. Lino Guzzella, President of ETH Zürich and Prof. Makoto Gonokami, President of the University of Tokyo and went into effect on January 12, 2016.



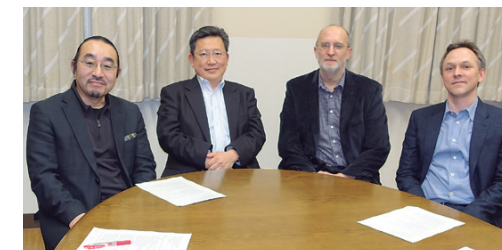
Strategic Partnership Agreement between ETH Zürich and the University of Tokyo

Academic Staff Exchanges Invitations

◆2015

February 19 – 20

Prof. Donald Hilvert, Head of D-CHAB and Prof. Jeffrey Bode, Head of Laboratory of Organic Chemistry at ETH Zürich visited the School of Science where they paid their respects to Dean Professor Makoto Gonokami. Afterwards they gave talks at a symposium. Later, Prof. Hilvert and Prof. Bode attended a meeting with Prof. Kaoru Yamanouchi, Vice-Dean of the School of Science, and Chairperson of the Department of Chemistry, Prof. Hiroaki Suga to discuss their strategic partnership.

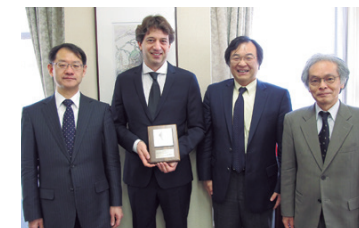


Meeting between (from the left) Chairperson of the Department, Prof. Hiroaki Suga, Vice-Dean of the School of Science, Prof. Yamanouchi (the University of Tokyo), Department Head Prof. Donald Hilvert and Laboratory Head Prof. Jeffrey Bode (ETH Zürich)

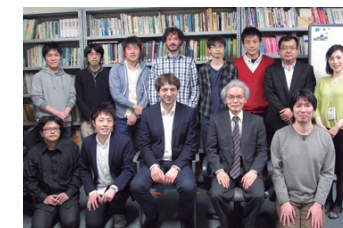
March 4 – 6

Prof. Gisbert Schneider of Institute of Pharmaceutical Sciences, D-CHAB of ETH Zürich, who is a Fellow of the School of Engineering, the University of Tokyo, visited and had discussions with Prof. Mamoru Mitsuishi, Dean of the School of Engineering, Prof. Tatsuya Okubo, Vice Dean of the School of Engineering and Prof. Kimito Funatsu.

As well as a seminar on chemical system engineering, Prof. Schneider conducted two seminars at the Funatsu Laboratory, providing opportunities for interaction among researchers in related fields.



Dean of the School of Engineering, Prof. Mitsuishi, Prof. Schneider, Vice-Dean, Prof. Okubo, and Prof. Funatsu (from the left)



After the seminar conducted by Prof. Schneider at the Funatsu Laboratory

August 14

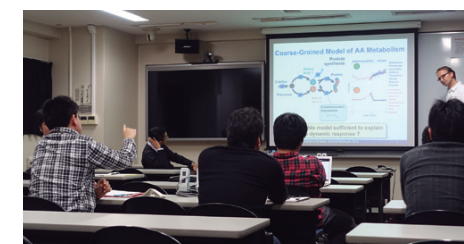
Dr. Philipp Eversmann, Head of Education for the National Center of Competence in Research (NCCR) Digital Fabrication Center, visited the laboratory of Associate Prof. Yusuke Obuchi of the Department of Architecture, School of Engineering. They held discussions on master's courses operation in the field of architecture based on a new master's course plan that would be established in D-ARCH and Digital Fabrication at ETH Zürich.

November 23 – 27

Prof. Gisbert Schneider of ETH Zürich visited once again and, in addition to giving an invited lecture at the International Chemoinformatics Symposium, took part in an open seminar organized by the Department of Chemical System Engineering, School of Engineering. He also met and talked with researchers in related fields.

December 1 – 5

Prof. Uwe Sauer of Institute of Molecular Systems Biology, D-BIOL, ETH Zürich was invited to give a seminar at the laboratory of Prof. Shinya Kuroda of the Department of Biological Sciences, School of Science.



Seminar conducted by Prof. Sauer

Academic Staff Exchanges Invitations

◆2016

March 10 – 11

Former President of ETH Zürich, Prof. Ralph Eichler, was invited to visit UTokyo. He discussed with President Makoto Gonokami and Executive Vice President, Prof. Ken Furuya who is in charge of International Affairs at the University of Tokyo. He also discussed with Executive Director Vice President, Prof. Hiroaki Aihara, Vice Dean of the School of Science, Prof. Kaoru Yamanouchi, Prof. Toshinori Mori, International Center for Elementary Particle Physics (ICEPP), and Associate Prof. Hirokazu Sugiyama, School of Engineering, and separately, with Deputy Director General of the Division of International Affairs, Prof. Naoto Sekimura. He also visited ICEPP and Kavli IPMU to discuss with Prof. Sachio Komamiya and Prof. Hitoshi Murayama, respectively.



Prof. Eichler with President Gonokami

March 22 – 30

Prof. Emo Welzl, Deputy Head of D-INFK, ETH Zürich, was invited to the Graduate School of Information Science and Technology to discuss his field of research and wider research in the field of computer sciences.

July 5

Two delegates from F. Hoffmann-La Roche, Ltd. (a company closely related to both ETH Zürich and the Department of Chemical System Engineering, School of Engineering), Dr. Rainer Schmidt, Site Head of Kaiseraugst, and Dr. Markus Mattern, Head of Sterile Manufacturing, visited the University of Tokyo. They met with Prof. Mamoru Mitsuishi, Dean of the School of Engineering, and Prof. Tatsuya Okubo, Vice Dean of the School of Engineering, and also gave a lecture at an open seminar organized by the department.



From left: Prof. Mitsuishi, Dr. Schmidt, Dr. Mattern, Associate Prof. Sugiyama



After the open seminar organized by the Department of Chemical System Engineering

July 27 – 30

Prof. Gisbert Schneider of the Institute of Pharmaceutical Sciences in D-CHAB at ETH Zürich visited Prof. Mamoru Mitsuishi, Dean of the School of Engineering at the University of Tokyo, and gave a lecture on July 28 at an open seminar organized for faculty members and students. As a member of the doctoral degree examination committee, Prof. Schneider also took part in the final examination of doctoral candidates in the Department of Chemical System Engineering on July 29.

July 30

Prof. Hans Jakob Wörner from D-CHAB at ETH Zürich participated as a speaker in the “International Symposium on Attosecond Science,” which was hosted by the University of Tokyo.

Academic Staff Exchanges Visits

◆2015

February 24 – 27

Associate Prof. Yusuke Obuchi of the Department of Architecture, School of Engineering, visited ETH Zürich at Section of Architecture and Digital Fablication of the Department of Architecture. In addition to Prof. Hubert Klumpner, the Head of the department, Prof. Fabio Gramazio and Prof. Matthias Kohler, Prof. Obuchi met with National Center of Competence in Research (NCCR) Digital Fabrication Managing Director Dr. Russell Loveridge and Dr. Phillip Eversmann, NCCR Head of Education. Prof. Obuchi watched a presentation on research conducted by two doctoral students at D-ARCH, ETH Zürich on the introduction of robots at construction sites. At the presentation, he critiqued their research on construction-scale next-generation 3D printers.



Construction robot

Prof. Obuchi took part in discussions over the prospect of future exchanges with ETH Zürich, focusing upon master’s courses.

March 3 – 4

Accompanying three undergraduate students, Associate Prof. Hirokazu Sugiyama of the Department of Chemical System Engineering, School of Engineering, visited Prof. Konrad Hungerbühler of D-CHAB of ETH Zürich and conducted a workshop on chemical process design.



From the right: Associate Prof. Sugiyama, Prof. Hungerbühler

March 12

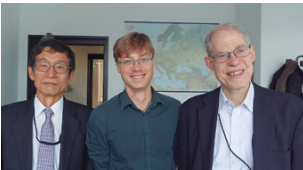
Prof. Hiroaki Suga, Chairperson of the Department of Chemistry, School of Science visited D-CHAB of ETH Zürich. He conducted a lecture on RaPID system drug development which was attended by more than 100 people. During his visit, Prof. Suga also held talks on matters such as joint-research planning and doctoral student exchanges with Prof. Jeffrey Bode, Head of the Laboratory of Organic Chemistry and Professor Jörn Piel and Prof. Kaspar Locher of D-BIOL.

Mid-March

Prof. Hiroshi Imai of the Gradate School of Information Science and Technology visited two professors of D-INFK of ETH Zürich, Prof. Komei Fukuda and Prof. Bernd Gärtner in charge of student exchanges. Discussions were held in which it was agreed to continue student exchanges for overseas study and promote exchanges of young researchers.

March 24

Prof. Robert Geller of the Department of Earth and Planetary Science, School of Science, visited Assistant Prof. Andreas Fictner of D-ERDW of ETH Zürich together with University Research Administrator (URA) Teruyuki Hayashi and held talks on how to promote joint research. After the talks, URA Hayashi visited Prof. Ursula Keller of D-PHYS of ETH Zürich and held discussions on the possibility of joint research and requirements for student exchanges.



URA Hayashi, Assistant Prof. Fictner, Prof. Geller (from the left)

June 4

Associate Prof. Hirokazu Sugiyama of the Department of Chemical System Engineering, School of Engineering paid a visit to Prof. Konrad Hungerbühler of D-CHAB of ETH Zürich, during which discussions were held on research.

July 3 – 6

Prof. Kimito Funatsu of the Department of Chemical System Engineering, School of Engineering visited Prof. Gisbert Schneider of the Institute of Pharmaceutical Sciences, D-CHAB of ETH Zürich and conducted two seminars.

July 10

Prof. Toshinori Mori of the International Center for Elementary Particle Physics visited Prof. Klaus Kirch of the Section of Elementary Particle Physics, D-PHYS of ETH Zürich, during which a meeting was held to discuss on the summer program in August.

August 18 – 20

At the invitation of Prof. Konrad Hungerbühler of the Institute of Chemical and Bioengineering, D-CHAB, Prof. Tatsuya Okubo of the Department of Chemical System Engineering, School of Engineering visited ETH Zürich and held discussions with Prof. Javier Pérez-Ramírez, Prof. Andrew de Mello and Prof. Wendelin Stark of the institute. Prof. Okubo also met researchers and administrative staff of laboratories of the institute. Many participants, including those from other groups attended a seminar conducted by Prof. Okubo at Hungerbühler Laboratory.

Academic Staff Exchanges Visits

◆2015


August 24 – 25	<p>Prof. Masahiko Hirao of the Department of Chemical System Engineering, School of Engineering visited Prof. Konrad Hungerbühler's laboratory in the Institute of Chemical and Bioengineering, D-CHAB of ETH Zürich. Prof. Hirao conducted a seminar there which was attended by one graduate student from the School of Engineering who was on an internship with F. Hoffmann-La Roche AG and one Japanese graduate student, Mr. Ryo Asakura from the School of Engineering enrolled in ETH Zürich. The seminar provided an opportunity for interaction between students.</p> <p>In addition, Prof. Hirao held talks with Prof. Stefanie Hellweg of the Institute of Environmental Engineering, D-BAUG of ETH Zürich on future joint research.</p>
September 16	<p>Prof. Sachio Komamiya, Director of the International Center for Elementary Particle Physics, held discussions with Prof. Klaus Kirch at the Paul Scherrer Institute (PSI) of the ETH Domain (an organization comprised of ETH Zürich and the Swiss Federal Institute of Technology Lausanne (EPFL) as well as a number of other laboratories, including PSI during which the two exchanged views on the summer programs.</p>
September 27 – 29	<p>At the invitation of ETH Zürich, Prof. Takeo Igarashi of the Department of Computer Science, Graduate School of Information Science and Technology gave a lecture at the Distinguished Computer Science Colloquium of D-INFK. In addition, it was confirmed that exchanges would be promoted including collaborative research with Prof. Olga Sorkine-Hornung and the Interactive Geometry Lab (IGL) under her supervision. Discussions were also held on future collaborative research with the NCCR Digital Fabrication Center.</p>
October 29 – November 3	<p>Associate Prof. Naokazu Kano of the Department of Chemistry, School of Science, visited D-CHAB of ETH Zürich where he gave a lecture on the Chemistry of Typical Elements. Prof. Kano also discussed plans for joint research with Prof. Hansjörg Grützmacher and exchanged views with other professors.</p>
November 21 – 24	<p>Prof. Kaoru Yamanouchi, Vice Dean of the School of Science, URA Yoshiko Baba, Financial Affairs Team Manager Takafumi Yokoyama, and Senior Staff of Personnel Team Atsuko Takatsuno visited ETH Zürich. The group met with ETH Global Director Jürg Brunnschweiler, Director Anders Hagström and Dr. Rahel Byland. It was agreed that both would promote opportunities for joint collaboration according to the Strategic Partnership Agreement. During their trip, they met with and interviewed Ms. Kana Yamada, a graduate student of the Department of Chemistry, who was on a short-term overseas studies program at ETH Zürich. They also discussed their progress on joint research projects (See pages 18-19) and spoke with Prof. Ursula Keller, D-PHYS at ETH Zürich. A decision was reached for the University of Tokyo to accept young researchers from the Keller Laboratory.</p>

◆2016

January 25 – February 1	<p>Associate Prof. Hirokazu Sugiyama and two of his students from the Department of Chemical System Engineering, School of Engineering, visited Prof. Konrad Hungerbühler of D-CHAB at ETH Zürich. They discussed research projects and held a seminar at Prof. Hungerbühler's laboratory. Prof. Sugiyama and his students also paid a visit to F. Hoffmann-La Roche, Ltd., Kaiseraugst site.</p>
February 10 – 12	<p>Associate Prof. Yusuke Obuchi of the Department of Architecture, School of Engineering, visited D-ARCH and Digital Fabrication Lab at ETH Zürich to discuss future exchanges with Prof. Hubert Klumpner, Head of the Department, Prof. Fabio Gramazio, and Prof. Matthias Kohler. He attended doctoral research presentations as well as a review meeting for the newly established master's course, and also visited the NCCR Digital Fabrication Center, which was under construction.</p>
November 21 – 26	<p>Associate Prof. Hirokazu Sugiyama of the Department of Chemical System Engineering, School of Engineering, visited Prof. Konrad Hungerbühler of D-CHAB at ETH Zürich and served as a doctoral degree examination committee member for Mr. Lukas Eberle, a doctoral student working on a joint research project with Prof. Hungerbühler. Associate Prof. Sugiyama also conducted a seminar at the laboratory of Prof. Hungerbühler and went to F. Hoffmann-La Roche, Ltd., Kaiseraugst site.</p>

Exchanges and Recruitment of Young Researchers

◆2015

Mid-February	<p>Dr. Volkher Scholz, a researcher at D-PHYS, ETH Zürich visited Prof. Mio Murao of the Department of Physics, School of Science. Dr. Scholz conducted three seminars and he informed that there was a master's course student of ETH Zürich who would like to go on to doctoral course at the University of Tokyo.</p>
Early-March	<p>Dr. Yibo Wu of D-BIOL of ETH Zürich visited Japan and conducted a seminar with the group of Prof. Shinya Kuroda of Department of Biological Sciences, School of Science. A decision was reached to initiate joint research and discussions were held on the possibility of student exchanges.</p>
March 11 – 12	<div><p>Assistant Prof. Toby Passioura of the Department of Chemistry, School of Science visited Prof. Donald Hilvert, Head of D-CHAB and Prof. Jeffrey Bode, Head of the Laboratory of Organic Chemistry of ETH Zürich. Discussions on joint research were held.</p><p>From the right: Prof. Passioura, Prof. Copéret, Head of Laboratory, Prof. Bode, Head of Laboratory, and Prof. Hilvert, Department Head.</p></div>
Mid-March	<p>Visiting Researcher Sonoko Moriyama of the Graduate School of Information Science and Technology visited ETH Zürich where she took part in joint research. In addition, Researcher Hironori Yoshida visited Prof. Matthias Kohler and Prof. Fabio Gramazio of the NCCR Digital Fabrication Center and held discussions during which it was agreed to promote joint research with Prof. Takeo Igarashi of the Graduate School of Information Science and Technology.</p>
April	<p>Dr. Naohiro Terasaka, who obtained a doctorate at the Suga Lab of the Department of Chemistry, School of Science in March 2015, took up his post as a postdoctoral researcher at ETH Zürich. Dr. Terasaka was recruited as a fellow of the international fellowship program, "Human Frontier Science Program (HFSP)."</p>
May	<p>Researcher Hironori Yoshida, Graduate School of Information Science and Technology, and Department of Architecture, School of Engineering, was assigned as a researcher of the NCCR Digital Fablication Center of ETH Zürich.</p>

Exchanges and Recruitment of Young Researchers

◆2015

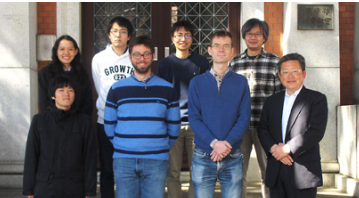
June 14 – 20 Assistant Prof. Yuki Goto of the Department of Chemistry, School of Science visited ETH Zürich where he attended the 16th International Symposium on Advancing the Chemical Sciences (ISACS16). He conducted lectures and initiated joint research at the laboratory of Prof. Jeffrey Bode, Head of Laboratory of Organic Chemistry, D-CHAB.

October Dr. Richard Obexer, who obtained his doctorate at the laboratory of Prof. Donald Hilvert, Head of D-CHAB was recruited under the JSPS Postdoctoral Fellowship for Foreign Researchers program and took up his post at the Suga Laboratory of the Department of Chemistry, School of Science.

October 30 The ETHZ-U-Tokyo “Interactive Workshop on Interactive Geometry” was held at the University of Tokyo with the participation of three young postdoctoral researchers from ETH Zürich, Dr. Daniele Panozzo, Dr. Wenzel Jakob and Dr. Fabrizio Pecem. Three other researchers from USA also took part and engaged in discussions on research and interaction together with Project Lecturer Daisuke Sakamoto and graduate students of the Graduate School of Information Science and Technology.

◆2016

February 29 – March 6 Dr. Matteo Lucchini of the Keller Group at D-PHYS of ETH Zürich was invited by Prof. Kaoru Yamanouchi, Vice Dean, School of Science, to conduct seminars and discussed about future joint research at the Yamanouchi Laboratory.



Dr. Lucchini (front row, left of center) and Prof. Yamanouchi group members

March 16 – 23 Assistant Prof. Vorapong Suppakitpaisarn and Visiting Researcher Sonoko Moriyama of Graduate School of Information Science and Technology visited Prof. Bernd Gärtner and Prof. Komei Fukuda of D-INFK of ETH Zürich.

March 18 – 27 Prof. Takeo Igarashi of the Graduate School of Information Science and Technology invited Dr. Hironori Yoshida from the NCCR Digital Fabrication Center of ETH Zürich.

August 1 – 2 Ms. May Szedlák, a doctoral student who serves as a research assistant (RA) in D-INFK at ETH Zürich, visited Japan and delivered an intensive lecture on the subject of combinatorial geometry at the Graduate School of Information Science and Technology.

◆2017

January 23 Dr. Luis Barba, a postdoctoral researcher at ETH Zürich, came to Japan to participate in “ETH Zürich-The University of Tokyo Strategic Partnership Symposium on Science, Design, Manufacturing, and Information” on January 19-20. During his stay in Japan, Dr. Barba delivered a lecture on the subject of computational geometry at the Graduate School of Information Science and Technology.



Lecture at Graduate School of Information Science and Technology by Dr. Barba (A postdoctoral researcher of D-INFK at ETH Zürich)

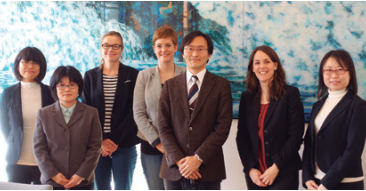
March 5 – 12 Assistant Prof. Hidefumi Hiraishi and Mr. Wataru Inariba (M1) of the Department of Computer Science, and Mr. Nobutaka Shimizu (M1) of the Department of Mathematical Information Science, of Graduate School of Information Science and Technology, visited D-INFK at ETH Zürich. They worked with young ETH Zürich researchers on a joint research project related to combinatorial optimization.

Staff Exchanges

◆2015

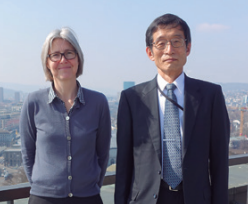
March 12 Based on an agreement reached at the kick-off symposium in February, URA Satoru Nogami, Assistant Manager of Accounting Administration Masashi Uesugi, Chief Librarian of the School Library Satoko Nishimura, staff member of the General Affairs Section Yuuki Kuroda and staff member of the Educational Affairs Section Junko Ikutani visited the ETH Zürich headquarters. Discussions were held with Anders Hagström, Director of Global Educational Affairs over the acceptance of overseas students and obtaining funding in Europe, as well as the accountability to taxpayers.

The party met with Prof. Donald Hilvert, Head of D-CHAB, Prof. Jeffrey Bode, Head of Laboratory of Organic Chemistry and Prof. Christophe Copéret, Head of Laboratory of Inorganic Chemistry. A tour of the research facilities was given.



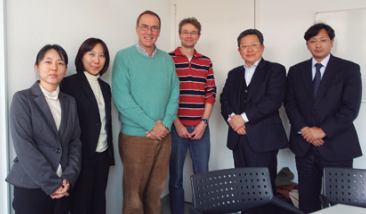
Dr. Wittek, supervisor of student exchanges (third from the left), Ms. Hofrichter (fourth from the left) with Dr. Byland, supervisor of international exchanges (second from the right)

March 23 URA Teruyuki Hayashi of the School of Science visited ETH Zürich where he held talks and confirmed the significance of research support collaboration with EU Grants Access Co-Head Agatha Keller.



Co-Head Keller and URA Hayashi

November 21 – 24 Yoshiko Baba, URA, Takafumi Yokoyama, Assistant Manager of Financial Affairs Team and Atsuko Takatsuno, Senior Staff of Personnel Affairs of the School of Science, visited ETH Zürich together with Prof. Kaoru Yamanouchi and Secretary Mihoshi Abe. With the members from ETH Global, EU Grants Access Co-Head Agatha Keller, Department Head Prof. Simon Lilly and Mr. Andreas Brandstetter of D-PHYS, they discussed systems to acquire outside funding, methods of allocation and management of university funds, and intra-departmental research support systems.



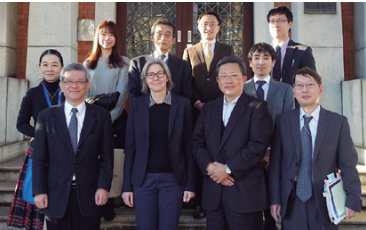
Department Head Prof. Lilly at center left and Mr. Brandstetter to the right with Prof. Yamanouchi and his party

◆2016

January 26 – 29 Co-Head Agatha Keller of EU Grant Access of ETH Zürich was invited to visit the University of Tokyo. Co-Head Keller met with University President Makoto Gonokami and Executive Vice President Ken Furuya (Director General of the Division of International Affairs) and shared her ideas on future exchanges. During informal meetings among Co-Head Keller, Prof. Naoto Sekimura, Deputy-Director General of the Division of International Affairs, Prof. Kaoru Yamanouchi, Vice Dean of the School of Science and Yukitsugu Ono, General Manager of the International Affairs Department, the four deepened their mutual understanding of their strategic partnership. In addition, Co-Head Keller gave a lecture entitled “International Research Management @ ETH Zürich” and discussed the promotion of research with URAs and staff members of research support division.



From the left: Executive Vice President Furuya, Co-Head Keller, President Gonokami and Prof. Yamanouchi



Front row, from the left: Prof. Sekimura, Ms. Keller, Prof. Yamanouchi and Mr. Ono

Student Interaction and Enrollment

◆2015

February 3

Mr. Yuta Murakami (D2) of the Department of Physics, School of Science visited Prof. Manfred Sigrist of D-PHYS of ETH Zürich. After a discussion, Mr. Murakami made a research presentation at a seminar.

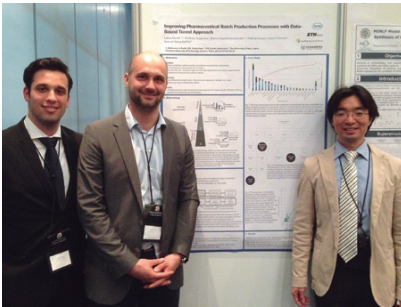
Mid-March

Ms. Hanna Sumita and Mr. Hidefumi Hiraishi, doctoral students in the Graduate School of Information Science and Technology, visited ETH Zürich and made a presentation at the Mittagseminar.

Prof. Hiroshi Imai of the Graduate School of Information Science and Technology went to Zürich and had a discussion with three of five graduate students who are currently studying abroad at ETH Zürich.

May 31 – June 4

Associate Prof. Hirokazu Sugiyama of the Department of Chemical System Engineering, School of Engineering took part in the 12th Process Systems Engineering / 24th European Symposium on Computer Aided Process Engineering (PSE2015/ESCAPE24), which were held in Copenhagen, Denmark. Together with ETH Zürich doctoral course students, he presented the results of joint research with Prof. Konrad Hungerbühler of D-CHAB of ETH Zürich and F. Hoffmann-La Roche. Mr. Gioele Casola, a graduate student of ETH Zürich who had spent approximately half a year at the Sugiyama laboratory also attended from Switzerland and made a presentation.



From the left: Mr. Casola, ETH Zürich graduate student and Associate Prof. Sugiyama

June 17 – 19

Mr. Daniel Reker, a doctoral student at the laboratory of the Prof. Gisbert Schneider of the Institute of Pharmaceutical Sciences, D-CHAB of ETH Zürich visited the Funatsu Laboratory at the Department of Chemical System Engineering, School of Engineering. He took part in a 3-day seminar and alongside interacting with students in the laboratory, made a research presentation with them.

Summer

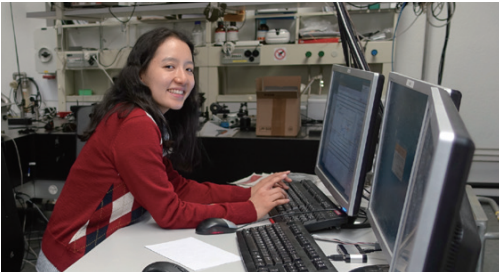
Mr. Ryo Asakura, a graduate from the Department of Applied Chemistry, School of Engineering went on to a master's course of D-CHAB at ETH Zürich.

October 1

Mr. Gioele Casola, originally from the Institute for Chemical and Bioengineering at D-CHAB in ETH Zürich enrolled in the doctoral course at the Department of Chemical System Engineering, School of Engineering, the University of Tokyo. (Supervisor: Associate Prof. Hirokazu Sugiyama)

October 1 – November 30

Ms. Kana Yamada of the Department of Chemistry (D2), School of Science conducted research at the laboratory of Prof. Ursula Keller of D-PHYS, ETH Zürich. (See pages 18-19 for her interview)



Ms. Kana Yamada at ETH Zürich

October 21

Four graduate students from the Graduate School of Information Science and Technology studied at ETH Zürich for a period of one year from September 2014. Mr. Shuichi Katsumata (M2) gave a presentation on studying at ETH Zürich at the “Study abroad guidance and advice” briefing session organized by Prof. Reiji Suda (Assistant to the Dean of Graduate School of Information Science and Technology, (International Exchanges Supervisor)) and engaged in activities to recommend student exchange to his juniors.

◆2016

All year round

Mr. Gioele Casola currently undertakes research activities at the laboratory run by Prof. Hirao and Prof. Sugiyama of the Department of Chemical System Engineering, School of Engineering. Originally from Switzerland, Mr. Casola received his master's degree from D-CHAB at ETH Zürich and is now a second year doctoral student at the University of Tokyo. When visiting Switzerland, Mr. Casola meets with Prof. Konrad Hungerbühler and receives advice from him regarding his research.



Mr. Gioele Casola (D2) at Hirao/ Sugiyama Laboratory

January 8

The Graduate School of Information Science and Technology at the University of Tokyo encourages members from overseas universities to serve as a member of doctoral candidate examining committees. In line with this policy, Prof. Komei Fukuda of ETH Zürich served as a member of the doctoral candidate examining committee in the Department of Computer Science.



From the left: PhD candidate Mr. Hiraishi, Associate Prof. Shibuya, Prof. Fukuda of ETH Zürich, Prof. Suda, Prof. Imai and Researcher Moriyama

January 25 – February 1

Associate Prof. Hirokazu Sugiyama accompanying Ms. Haruku Shirahata (M1) and Mr. Kensaku Matsunami (B4), who were students of Prof. Hirao and Prof. Sugiyama's laboratory in the Department of Chemical System Engineering, School of Engineering, visited Prof. Konrad Hungerbühler of D-CHAB at ETH Zürich and participated in joint research activities. They also visited F. Hoffmann-La Roche, Ltd., Kaiseraugst site.



Visit to ETH Zürich
Prof. Hungerhueler (third from left) and Associate Prof. Sugiyama (second from right)

February 24 – March 22

Mr. Hidefumi Hiraishi of the Graduate School of Information Science and Technology spent approximately four weeks at ETH Zürich with the support of the school.

March 16 – 23

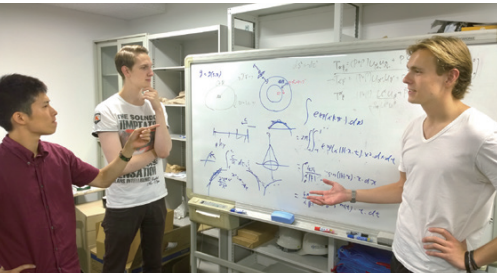
Graduate student Naoto Osaka of the Graduate School of Information Science and Technology, visited Prof. Bernd Gärtner and Prof. Komei Fukuda of D-INFK at ETH Zürich.

April – September

ETH Zürich Graduate Students Alzbeta Kubinocova, Janis Fluri, and Julian Alexander Riebartsch spent time at the laboratories of Prof. Eiichi Nakamura of the Department of Chemistry, Prof. Junichi Yokoyama of the Research Center for the Early Universe and Lecturer Kathrin Wimmer of the Department of Physics, School of Science, as a special research student based on the Strategic Partnership Agreement.



Ms. Kubinocova (M1) from ETH Zürich making a presentation at the Department of Chemistry



Mr. Fluri (at center, M1) and Mr. Riebartsch (right, M2) from ETH Zürich discussing with a colleague at the Research Center for the Early Universe, School of Science

Student Interaction and Enrollment

◆2016

April

ETH Zürich graduate student, Mr. Matthias David Strodtkötter, enrolled as a doctorate student at Prof. Mio Murao Laboratory of the Department of Physics, School of Science.



Mr. Strodtkötter (D1) from ETH Zürich talking with Prof. Murao of the Department of Physics

June 1 – August 31

Under the Materials Education Program for Future Leaders in Research, Industry, and Technology (MERIT), Ms. Eunice Phua (D1) of the Department of Chemistry, School of Science, was sent to ETH Zürich to conduct short-term research under Prof. A. Dieter Schlüter of D-MATL.

Late July

Mr. Lukas Eberle, a doctoral student of ETH Zürich, drafted a research paper on joint research conducted by Associate Prof. Hirokazu Sugiyama of the Department of Chemical System Engineering, School of Engineering, and Prof. Konrad Hungerbühler of D-CHAB at ETH Zürich. After spending two weeks in the laboratory run by Prof. Hirao and Associate Prof. Sugiyama of the Department of Chemical System Engineering, School of Engineering, Mr. Eberle completed the research paper, which was accepted for publication.

September onwards

One of the first generation graduates of the Global Science Course (GSC) in the School of Science at the University of Tokyo enrolled in the master’s course of D-CHAB at ETH Zürich.

September – March 2017

Ms. Anicia Zeberli, a master’s course student of D-CHAB at ETH Zürich, came to the University of Tokyo as an international internship program student and joined the laboratory run by Prof. Hirao and Associate Prof. Sugiyama of the Department of Chemical System Engineering, School of Engineering. Anicia’s travel and living expenses were primarily supported by the School.



Ms. Anicia Zeberli, a master’s course student of ETH Zürich, conducting research at the Hirao/Sugiyama Laboratory

September – March 31, 2017

Mr. Ruben Emanuel Wohlgenannt, a master’s course student of D-INFK at ETH Zürich, came to Japan as a special research scholarship student under the University-wide Student Exchange Program (USTEP). He is currently at the Graduate School of Information Science and Technology.

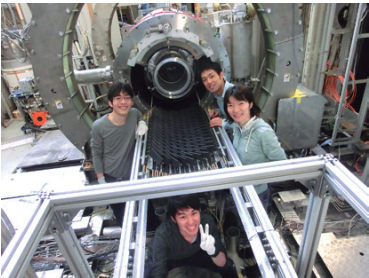
Mr. Jörg Wieder (M2) from ETH Zürich currently undertakes research activities at Associate Prof. Masashi Yokoyama’s laboratory in the Department of Physics, School of Science.

Summer Program

◆2015

August 24 – 31

A total of eight students comprised of five graduate students from the Department of Physics, School of Science and three graduate students from ETH Zürich participated in research on the latest particle physics and experimental technology at the Paul Scherrer Institute (PSI) in the ETH Domain. They engaged in joint work and discussions, and also had interactions with researchers from other countries taking part in international joint researches.

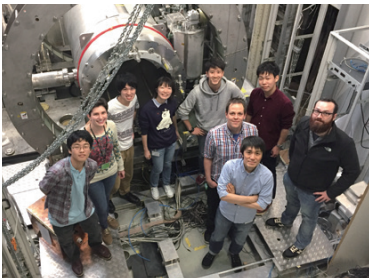


Graduate students of the University of Tokyo in training at the Paul Scherrer Institute Summer Program in 2015

◆2016

August 10 – 12 & August 25 – 29

A group of five graduate students from the Department of Physics, School of Science, and three graduate students from ETH Zürich participated in the summer school program at the Paul Scherer Institute (PSI). Through working together utilizing laboratory equipment used in international collaborative research, the participants learned about state-of-the-art research related to particle physics and experimental technology. This program also provided students from both universities with the opportunity to interact with one another through participating in joint activities and discussions.



Summer Program in 2016

Symposiums, Seminars and Workshops

◆2015

February 19

Prof. Donald Hilvert, Head of D-CHAB and Prof. Jeffrey Bode, Head of Laboratory of Organic Chemistry at ETH Zürich, visited the School of Science where they gave talks at a symposium.



Prof. Hilvert giving a lecture.



Prof. Bode giving a lecture.

November 12

Prof. Kaoru Yamanouchi, Vice Dean of the School of Science, and Ms. Mayuko Nakai of the International Affairs Department attended a workshop on human resources systems for academic staff and researchers held at the Swiss Embassy. This was attended by Dr. Matthias Frey, Head of the Science and Technology office of the Swiss Embassy stationed in Japan, Mr. Thomas Eichenberger, Head of Faculty Affairs, Dr. Rahel Byland, ETH Zürich, and Mr. Boris Dongelmans, ETH representative stationed in Japan. They met and held discussions with representatives from other universities and organizations.



Workshop at the embassy. Prof. Yamanouchi can be seen center left.

Science and Technology Office Tokyo, Embassy of Switzerland in Japan : <https://www.stofficetokyo.ch/eth-zurich-discusses-internationalization-with-partners-in-japan/>

Symposiums, Seminars and Workshops

◆2015

December 5

Associate Prof. Yusuke Obuchi of the Department of Architecture, School of Engineering, held a symposium on the production of a pavilion, which was created by industry-academia collaborative efforts with Associate Prof. Jun Sato's laboratory in the Department of Architecture, Prof. Takeo Igarashi's laboratory in the Graduate School of Information Science and Technology, and Takenaka Corporation. Prof. Matthias Kohler, D-ARCH and Digital Fabrication at ETH Zürich, was invited as a Keynote Speaker.



Lecture by Prof. Kohler



Symposium poster

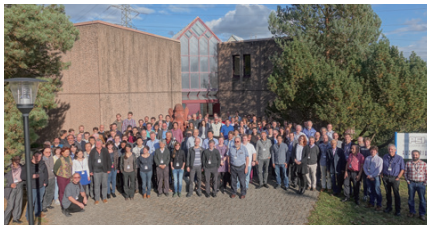
◆2016

End of March

An international joint seminar on muon decay joint research and related research conducted at Paul Scherrer Institute (PSI) was held at the University of Tokyo (Six people from the University of Tokyo and three from ETH Zürich took part). A presentation on the results of 2015 summer program took place.

October 16 – 20

“Physics of Fundamental Symmetries and Interactions” (PSI2016), an international workshop on particle physics, was held at the Paul Scherrer Institute (PSI) of the ETH Domain. Eight students from the University of Tokyo, and six from ETH Zürich, participated in the event. During the workshop, participants had active discussions with researchers as well as gave talks and poster presentations. The outcome of the summer program held in August was also presented.



Group Photo at PSI 2016

November 9 – 10

Prof. Jörn Piel of D-BIOL at ETH Zürich, alongside seven postdoctoral researchers and four doctoral students, were invited to Japan for the “ETHZ-UTokyo Joint Symposium of Frontier Chemistry”, which was organized by Prof. Hiroaki Suga of the Department of Chemistry, School of Science, and held at the University of Tokyo. During this symposium, Prof. Takeaki Ozawa of the Department of Chemistry, and young researchers from associate professors to doctoral students, presented their research results and exchanged views related to interdisciplinary research fields.

Nearly 100 people joined the symposium, including many researchers and students from the University of Tokyo. Included in the participants was a postdoctoral researcher from ETH Zürich, who does research work at the School of Science. During the symposium, participants actively discussed topics in a wide range of fields, including physical chemistry and chemical biology.

The reception party held in the evening of the 9th provided participants with further opportunities to exchange ideas, and was also attended by two officers from the Embassy of Switzerland, including the head of the Science and Technology Office.

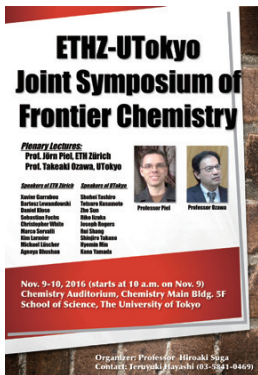
Science and Technology Office Tokyo, Embassy of Switzerland in Japan : <https://www.stofficetokyo.ch/joint-eth-zurich-tokyo-university-workshop/>



At the symposium



Prof. Suga, Dr. Frey, Head of Science and Technology Office, and Prof. Piel



Symposium poster

◆2017

January 19 – 20

The “ETH Zürich-The University of Tokyo Strategic Partnership Symposium on Science, Design, Manufacturing, and Information” was held with the aim to explore the potential of transdisciplinary research activities. During this event, the two parties pertaining to the strategic partnership agreement exchanged views on similarities and differences between a wide range of subjects, ranging from particle physics to architecture.

Following an opening address by Prof. Masashi Haneda, Executive Vice President of the University of Tokyo and Director General of the Division of International Affairs, Prof. Naoto Sekimura, Deputy Director General of the Division of International Affairs, The University of Tokyo, gave a speech on the Strategic Partnership Initiative.

Professors, researchers and graduate students from ETH Zürich and the University of Tokyo participated in eight sessions, including a poster session, which consisted of presentations and discussions in the subject areas of particle physics, physical chemistry, organic chemistry, information science and technology, drug design, pharmaceutical processing, and architectural design.

This symposium had a total of 150 participants. Six professors, four researchers and five graduate students from ETH Zürich, and a total of 10 professors and graduate students from the University of Tokyo, gave oral presentations while the poster session had twenty-five presentations. Researchers from F. Hoffmann-La Roche, Ltd. and two Japanese companies delivered oral presentations as well.

During the seven oral sessions, participants from both universities discussed not only their respective research findings but also the successful results of activities related to the Strategic Partnership Initiative. This helped the participants engage in fruitful discussions during the Q&A sessions that followed each presentation and the poster session held in the evening on the first day of the event.

In concluding the symposium, Prof. Kaoru Yamanouchi, Executive Committee Chairperson, summarized the discussions undertaken during the event and expressed his hope for continued partnership with ETH Zürich.

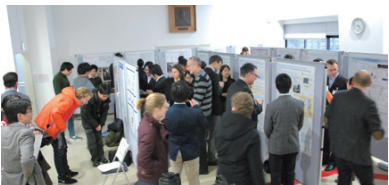
ETH Zürich : <https://www.ethz.ch/en/the-eth-zurich/global/eth-global-news-events/2017/02/more-than-just-bows-and-business-cards.html>



Symposium poster



At the symposium



Poster session



Active discussions

Prior to the symposium, Prof. Matthias Kohler of D-ARCH at ETH Zürich and Dr. Russell Loveridge of the NCCR Digital Fabrication Center visited Associate Prof. Yusuke Obuchi's laboratory in the Department of Architecture, School of Engineering, on January 17. Afterwards, they held a reception, inviting Dr. Matthias Frey, Head of the Science and Technology Office at the Embassy of Switzerland in Japan and Deputy Head Ms. Kyoko Suzuki, as well as Prof. Kaoru Yamanouchi, Vice Dean of the School of Science. A group led by Prof. Kohler also visited two of Japan's leading general contractors and one heavy industry company.

Science and Technology Office Tokyo, Embassy of Switzerland in Japan : <http://www.stofficetokyo.ch/nccrdfab/>

March 28 – 29

The University of Tokyo will hold an international joint seminar on the muon decay collaborative research, and other related research, conducted at the ETH Domain's Paul Scherrer Institute (PSI). The participants will include six graduate students from the University of Tokyo and three from ETH Zürich. Results of the PSI summer program in August 2016 will be presented and active discussions are expected to be held on future plans to enhance student development.

Student Interview

Ms. Kana Yamada did research at the Swiss Federal Institute of Technology Zürich (ETH Zürich) for approximately two months from October 1, 2015 under the ALPS (Advanced Leading Graduate Course for Photon Science) Overseas Dispatch Program. We interviewed her on November 22, 2015, as she was nearing the end of her stay.



Ms. Kana Yamada

Department of Chemistry, School of Science
Doctoral Course Second Year (at that time)
(Yamanouchi Laboratory)

At the Yamanouchi Laboratory, the University of Tokyo, Ms. Yamada investigates responses of atoms and molecules to short-wavelength light that is generated using an ultrashort pulsed near-infrared laser light. We asked Ms. Yamada about her experience during her two-month stay at ETH Zürich.

What has impressed you the most during your time here?

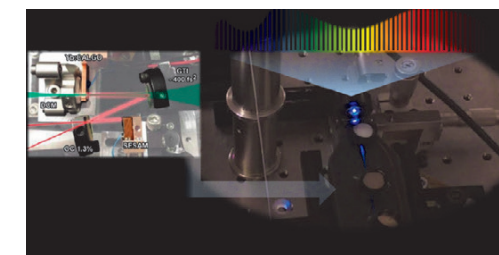
I was impressed by the absence of a hierarchical structure in the laboratory because this creates an atmosphere that makes it easy to discuss matters. Everyone says what they want to and it does not lead to arguments or create bad tension. In addition, there is a very friendly atmosphere throughout the whole laboratory and I sometimes go out with other members of the laboratory on weekends.



<http://www.ulp.ethz.ch/>

Could you tell us about the results you have achieved within this limited time?

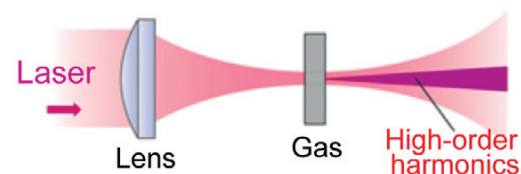
The experimental phase turned out to be a little later than I had imagined before coming here and I have only now finally reached the stage where I can conduct the experiments I had initially planned. Because my time at ETH Zürich is about to come to an end, some members of the laboratory have said to me, "Are you really going back to Japan now?" I will be returning to Japan very soon, but I am in the process of considering the possibility of coming to this laboratory again to conduct my experiments.



<http://www.ulp.ethz.ch/>

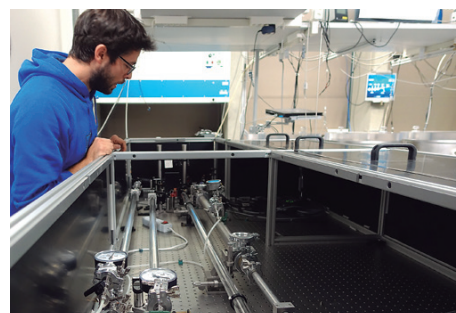
What laboratory did you choose for your research abroad and why?

I chose the laboratory of Prof. Ursula Keller of the Department of Physics at the Swiss Federal Institute of Technology for my overseas research. I wanted to try using techniques and conducting research in fields that are a little different to those I have experienced up till now. Like the Yamanouchi Laboratory, Prof. Keller's Laboratory conducts research using short-wavelength light (high-order harmonics) generated by laser light. After reading papers about their research, I realized that the high-order harmonics generated at Prof. Keller's Laboratory differ to those generated at the Yamanouchi Laboratory in terms of wavelength distribution and pulse width. Furthermore, techniques for measuring phenomena are also different, and their research targets not only atoms and molecules, but also solid samples.



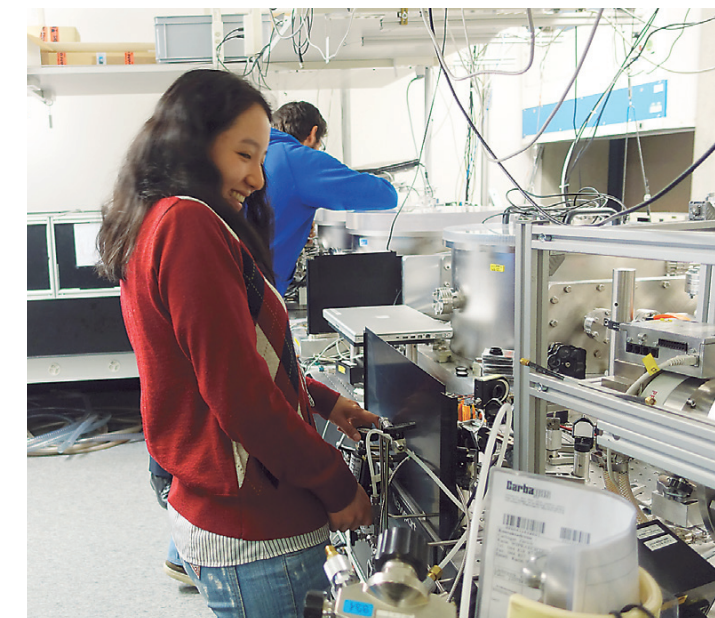
What hardships have you experienced when conducting research in a different environment?

Several months before I began my research overseas, I sent an email to the laboratory asking about the kind of research they conduct and this smoothed my entry into the research group. As well as Swiss researchers, there are also a lot of researchers from other countries at the laboratory, so the basic language used is English. Although I did have some difficulties with English for everyday conversation right after I arrived in Switzerland, I didn't have any particular problems with English per se since seminars at the Yamanouchi Laboratory are conducted in English.



What are your ambitions for future overseas research?

I was thinking of moving onto the world of academics in Japan after getting my doctorate. This time, I have been able to make use of the ALPS Overseas Dispatch Program, so I decided to take advantage of the opportunity and come to a laboratory overseas. Since this experience has given me the chance to learn about the research environment overseas and experience an atmosphere conducive to debate, I have now added work and research overseas as another of my career path options.





東京大学
THE UNIVERSITY OF TOKYO

- School of Science
- School of Engineering
- Graduate School of Information Science and Technology
- International Center for Elementary Particle Physics