Climate influence, liking for stereotyped view, but various people

Tadaharu Tsumoto, Director, JSPS Stockholm Office

At long last or finally, comfortable weathers with a refreshing breeze suddenly ended, and a dark, cold season has come to Stockholm. In the early November when I am writing this essay, sun rises at about 7:20 in the morning and sets at about 3:30 in the evening. It is anticipated that the day time will further be shortened, and at the day of winter solstice it will be at 8:40 am and 2:47 pm, respectively. Today the outside temperature is about 0 degree centigrade in the morning and 4 degrees centigrade at noon, which corresponds to those of midwinter in Tokyo or Osaka. It is said that it will become further colder in Stockholm. However, an issue in concern is not the temperature but the weather. Here thick clouds cover the sky so that there is no sunshine anywhere and anytime, and this type of weather is said to last every day until February. I do not like snow, but according to people here they feel relieved with snow light when snow falls. This kind of gloomy weather may give an influence to human behaviors. Furthermore, it raises a question of whether such a climate gives any influence to nature, disposition, character or feelings of people, and further to culture and thought.

When this question comes to mind, most Japanese people at my generation may remember a well-known book “Fudo” in Japanese or “Climate” in English by Tetsuro Watsuji, who argued that climate influences thinking and culture of people. This book was published in 1935 and now is a historical masterpiece or a great classic, and subsequently it gave substantial influences on arguments about the disposition or character of Japanese and further on the comparative study of civilization in Japan. However, it seems natural that there is a criticism on the content of the book, arguing that it is too simple or a kind of environmental determinism. Speaking in trendy Japanese words, this argument implicates that the Watsuji’s book described a kind of a stereotyped view of humans and civilizations. The word “stereotype” may correspond to “Ruikeika” in Japanese that means classifying objects into simple types. These days many Japanese people are not familiar with the word “Ruikeika” so that I use the word “stereotype” in this essay.

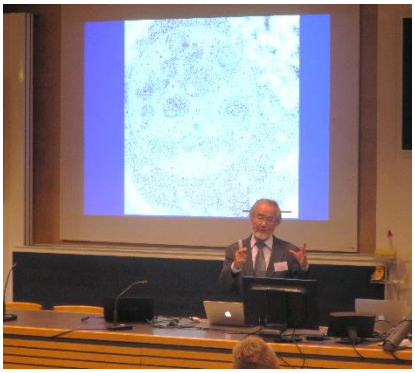
The Japanese word of English origin “Sutereotaipu” is often used with a negative nuance in Japan. However, the stereotyped view of human nature is often spoken in everyday conversation and chattering in an amusing or laughable manner. Most jokes enjoyed in many countries in the world are based on the stereotyped view of nations or races, such as typical German behavior in this way and most Italian in that way and so on. There are so many jokes of this kind that I do not mention each example in the present essay. In addition to the jokes, there are also stereotype-like expressions of characters of particular nations such as “Spanish passion”, “English witticism”, “French esprit”, and so on. When I lived in Germany nearly 40 years ago I had a personal experience as follows: I was walking with a German friend in a parking place and we looked into cars unintentionally, and then he said that “the driver of this car must be an American”. I asked why. He said “the inside of this car is very messy. German never leave the inside of their cars in such a mess. Americans are not good at keeping everything in order and leave everything in a mess.” Obviously this was based on his personal prejudice, but it was so funny to me that I still keep the memory about this episode for about 40 years. After having arrived at Stockholm, I often heard characteristics of Swedish people in everyday conversations or chattering in an interesting way. Regrettably I am not yet qualified to talk about characteristic features of Swedish, because I have spent only about four months after I came to Sweden. In anyway, people in every country in the world like to talk about a stereotyped view of features of people, and such a view is good topics of chattering.

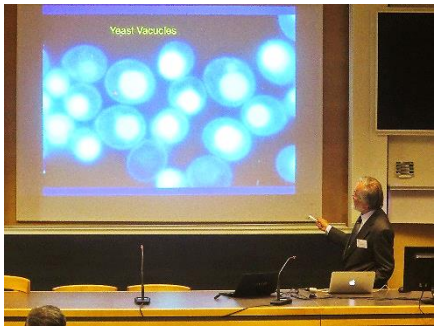
However, such a stereotyped view is often not consistent with the actual behaviors of people. For example, I heard the following story in Japan: On crossing the street equipped with traffic signals, people in Japan, Germany and Northern Europe faithfully follow the signal whereas Latin people in the Southern Europe do not keep the rule of traffic. I understood that it is really the case. After I came to Stockholm, however, I often observed that many people in Sweden ignored the traffic signal so that they cross the street even when the signal is red if no cars are coming. There are of course the minority of people who do not ignore the signal. This is just an example for episodes of everyday life, but implicates that a stereotyped view often misleads us to an incorrect view of other people. Swedish people whom I met so far are not so many, but I learned that they are very various from being cheerful to introverted, and from being active to discreet. Realistically, however, it cannot be denied that the stereotyped view such that Swedish people behave in this way and Finnish people behave in that way may not fade away, because people over nations and races in the world are fond of or addicted to the stereotyped view. Nevertheless I would like to emphasize that people are various and the stereotyped view is often incorrect. Therefore, we should keep the variety of people in mind when we meet others for the first time and wish to start a good relationship with them.

In the next morning after the first snow fall this winter. On November 2 in the campus of the Karolinska Institutet

The 2016 Nobel Prize Laureates

In October the 2016 Nobel Prize Laureates were announced. The Nobel Prize in Medicine or Physiology was awarded Prof. Yoshinori Ohsumi, Tokyo Institute of Technology, for his discoveries of the mechanisms of autophagy. This research has led to a new paradigm in our understanding of how cells recycle their contents. Prof. Ohsumi's discoveries have created an understanding of the fundamental importance of autophagy in different physiological processes, such as the cells' adaptations to starvation or responses to infection. Mutations in autophagy genes can cause diseases, and the autophagic process is involved in several conditions such as cancer and neurological diseases.





Prof. Ohsumi at the first Uppsala University – Tokyo Tech Joint Symposium, coorganized by JSPS Stockholm Office in September 2014 (see page 5)

The complete list of 2016 Nobel Prize Laureates

Physiology or Medicine
Yoshinori Ohsumi "for his discoveries of mechanisms for autophagy"

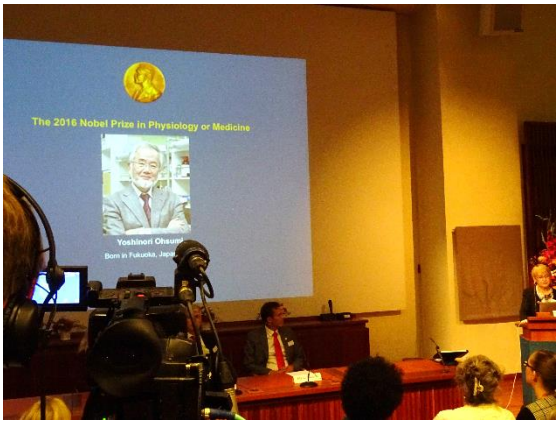
Physics
David J. Thouless, **F. Duncan M. Haldane** and **J. Michael Kosterlitz** "for theoretical discoveries of topological phase transitions and topological phases of matter"

Chemistry
Jean-Pierre Sauvage, **Sir J. Fraser Stoddart** and **Bernard L. Feringa** "for the design and synthesis of molecular machines"

Peace
Juan Manuel Santos "for his resolute efforts to bring the country's more than 50-year-long civil war to an end"

Economic Sciences
Oliver Hart and **Bengt Holmström** "for their contributions to contract theory"

Literature
Bob Dylan "for having created new poetic expressions within the great American song tradition"



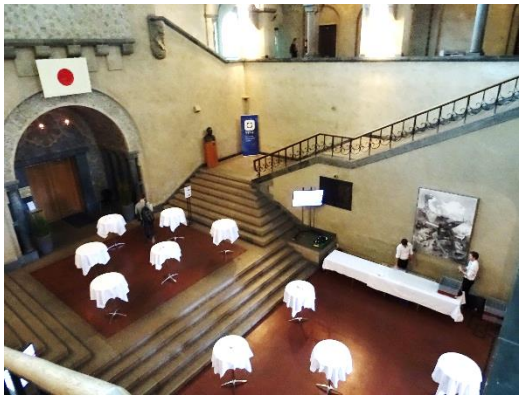
At the moment of the announcement of Nobel Prize Laureate in Medicine Prof. Ohsumi at Nobel Forum, Karolinska Institutet on 3 October 2016.

Seminar on Student and PhD candidate mobility between Norway and Japan, at NTNU, Trondheim, Norway

Deputy Director Kawakubo presenting the JSPS Fellowship programs

On September 7 2016, a seminar with the theme to inspire and encourage increased mobility between Norway and Japan for bachelor, master and PhD students was held at the Norwegian University of Science and Technology (NTNU) in Trondheim. The seminar was held by the NTNU Alumni and NorAlumni Japan in cooperation with the Norwegian Centre for International Cooperation in Education (SiU). JSPS Stockholm Office had recommended Japanese researchers living in Norway to attend this seminar to promote further exchange with Norwegian Scientists. From JSPS Stockholm Office, Deputy Director Kawakubo and International Program Associate Nakakane participated in the seminar and Deputy Director Kawakubo presented the JSPS programs with a focus on the fellowship programs.

This seminar was not only focused on students thinking about studying abroad in Japan, but it was also for programme leaders and Norwegians thinking about starting businesses, industries, etc. in Japan and what kind of differences there are between the different business cultures. The themes were broad for both a student and a business audience. After the seminar a networking session was held where people from different fields could exchange information with one another.



The hall where the networking session was held

Joint SPring-8 – MAX IV Laboratory Workshop on New Light Sources and Biological Applications, Lund, Sweden

On September 8 and 9 2016, a workshop was held at the MAX IV Laboratory in Lund, Sweden. It was jointly organized between MAX IV Laboratory, the Institute for Protein Research of Osaka University, Japan Synchrotron Radiation Research Institute (JASRI), RIKEN SPring-8 Center, the Department of Cell and Molecular Biology of Uppsala University and JSPS Stockholm Office. The workshop was about new light sources and biological applications and it was held at the biggest and most advanced synchrotron light facility, MAX IV, in Lund, Sweden, which was opened earlier this year.

During the workshop, seminars were held by both young researchers and professors, and after each seminar there were time for questions and discussions that engaged the participants. Deputy Director Kawakubo of the JSPS Stockholm Office delivered a presentation about the activities of JSPS Stockholm Office and the JSPS international collaboration programs. After the seminars on September 8, a reception was held with a buffet of Swedish dishes and sushi. While enjoying the food the participants could mingle and network. After the seminars on September 9, a tour of the facilities at the MAX IV Laboratory was held. The workshop was very successful, with two days filled with fulfilling discussions and research exchange.

Please find a report on the workshop by Prof. Atsushi Nakagawa on page 12 as well as some pictures from the workshop.

3rd Tokyo Tech – Uppsala University Joint Symposium, Uppsala, Sweden

For the third time, the Tokyo Institute of Technology – Uppsala University Joint Symposium was held in Uppsala. The first time, in September 2014, it was also held at Uppsala University, and in November the second symposium was held at Tokyo Institute of Technology. On September 12-13 the symposium was held at Uppsala University, and it strengthened the research collaborations between researchers from Uppsala University and researchers from multiple universities in Japan.

Vice Chancellor of Uppsala University, Prof. Eva Åkesson, and the President of Tokyo Institute of Technology, Dr. Yoshinao Mishima delivered the opening speeches for this two day symposium. Deputy Director Kawakubo delivered a presentation of JSPS activities and programs to promote collaborative research. Prof. Kristina Edström, who is a member of IVA and Prof. Gunnar Ingelman from KVA held keynote speeches. There were about 80 participants, being both students and professors, from Uppsala University, Tokyo Institute of Technology, Tokai University and Hokkaido University. The themes of the plenary session lectures were “Big Data”, “Innovation and Industrial Cooperations”, and “Innovative Education”. In the following breakout sessions, the themes were “Energy Technology”, “Materials Sciences”, “Energy Systems and Analysis”, “Entrepreneurship and Innovation”, “Mathematics”, “Applied Nuclear Physics”, “Serious Games and Human Interface”, and “Digitalization”.

After the program of the first day, a reception was held in the Linnaeus Garden in Uppsala. Other than the participants of the symposium, ambassador Jun Yamazaki of the Embassy of Japan in Sweden participated in the reception dinner and offered a guest speech.

Please find a report on the symposium by Prof. Makoto Ando on page 14-15.

Prof. Eva Åkesson, Vice Chancellor of Uppsala University delivering an opening speech

Dr. Yoshinao Mishima, President of Tokyo Institute of Technology delivering an opening speech

Deputy Director Kawakubo presenting JSPS’ activities

Some of the participants of the well attended symposium

Japan-Lithuania Joint Life Science Symposium, Vilnius, Lithuania

On September 13 2016, the Japan-Lithuania Joint Life Science Symposium was held in Vilnius, Lithuania. It was coorganized by the Research Council of Lithuania (RCL), JSPS and the Embassy of Lithuania in Japan. Researchers from Japan and Lithuania participated in the symposium, and local media followed the event. The Symposium was opened with Opening Addresses from Mr. Egidijus Meilunas, ambassador of Lithuania in Japan, and Mr. Toyoei Shigeeda, ambassador of Japan in Lithuania. Then, Prof. Dainius H. Pauža, the Chairman of the Research Council of Lithuania, and Mr. Takaaki Iwasa, Executive Director of Japan Society for the Promotion of Science (JSPS), offered their greetings to the participants. After that Prof. Pauža and Mr. Iwasa, held the ceremony of signing the Memorandum of Understanding. This Memorandum of Understanding will enable JSPS and RCL to launch bilateral calls for proposals which will strengthen the scientific links between the two countries and to make more joint research teams able to implement research projects in many different scientific fields. Having concluded the signing ceremony, three researchers from Japan and three from Lithuania presented their research in the life science field.

JSPS Executive Director Mr. Iwasa

RCL Chairman Prof. Pauža

JSPS Executive Director Mr. Iwasa and RCL Chairman Prof. Pauža signing the Memorandum of Understanding

The participants of the symposium

The 15th KI Cancer Retreat, Djurönäset, Sweden

Karolinska Institutet held its KI Cancer Retreat at Djurönäset outside Stockholm on September 26-27. JSPS Stockholm Office was one of the organizers of the event and Director Tsumoto, Deputy Director Kawakubo and International Program Associate Kitajima attended it. This year's retreat was the fifteenth, and it was the first time that students and professors from the University of Tokyo in Japan were invited. Six researchers and ten students attended the retreat.

Prof. Ingemar Ernberg of Karolinska Institutet held the opening remarks for the event and Prof. Kohei Miyazono of the University of Tokyo introduced about the university to which he belongs. Thereafter presentations on cancer research were held by 43 researchers from Sweden, Japan, Germany and Canada over the two days. Approximately 240 participants were able to widen their perspectives and knowledges in the different research areas that were presented. After the first day's program, there was a dinner and a poster session, where young researchers from different countries could talk about their own research, mingle and network.

Director Tsumoto and Deputy Director Kawakubo together with Prof. Miyazono and Prof. Ichijo from the University of Tokyo

The 3rd RIKEN CLST – KI SciLifeLab Joint Symposium, Stockholm, Sweden

On September 29, RIKEN Center of Life Science Technology (CLST) and Karolinska Institutet Science for Life Laboratory (SciLifeLab) held a joint symposium on the theme "Frontiers in Life Science Technologies – Decoding Health and Disease" at KI in Sweden. This was the third time this joint symposium was held, and the first time was in October 2014 in Stockholm and the second in November 2015 in Yokohama.

The symposium was opened by the SciLifeLab Director, Prof. Olli Kallioniemi, and then three seminar sessions were held. The symposium was divided into the following three sessions: session 1: Imaging and Disease, Session 2: RNA and Diseases and Session 3: Single, Rare and Stem cells and Disease. After each presentation by the 17 Swedish and Japanese researchers, there was time for questions and discussion. Director Tsumoto, Deputy Director Kawakubo and International Program Associate Nakakane participated from the JSPS Stockholm Office, and Director Tsumoto presented the JSPS activities. There were a lot of researchers at the event who have experiences of studying and researching in Japan, so there were many at the event who were interested in the activities of JSPS Stockholm Office and the JSPS Fellowship Programs.

Prof. Yasuyoshi Watanabe, Director of RIKEN CLST

Director Tsumoto presenting the JSPS activities

KVA-JSPS Seminar with Prof. Shigeru Ida, Lund, Stockholm, Uppsala, Sweden

Since 2009, JSPS has together with the Royal Swedish Academy of Sciences (KVA) organized seminars with Japanese lecturers. The second seminar in the FY2016 series was held with the invited speaker Prof. Shigeru Ida from Tokyo Institute of Technology on October 13, 17 and 18.

On October 13 and the morning session on October 17, each seminar was held at Lund University and Stockholm University with the theme ”Planet Formation and Volatile Delivery to Terrestrial Planets”. During this seminar Prof. Ida presented how planets are formed, the formation of planetesimals, building blocks of planets and orbital migration of planets. He also discussed the mechanisms of delivering water to the Earth.

During the afternoon session on October 17 Prof. Ida delivered a lecture on the theme ”Japanese Activities of Astrobiology: Earth-Life Science Institute (ELSI) and Japan AstroBiology Center (J-ABC)” at Stockholm University. He talked about the research of ELSI to understand the origin of the Earth and life, and he also presented the research that is being conducted at J-ABC concerning planets outside of the solar system.

On October 18, he delivered the lecture with the same title as he did on the 13th at Uppsala University.

Among 110 participants attended this seminar series, and it became obvious that it was an interesting topic considering all the questions and comments after the lectures and the coffee breaks. In the beginning of all these seminars, Director Tsumoto presented JSPS’ activities and programs, and booths with information material from the JSPS Stockholm Office were arranged where individual questions were answered by Deputy Director Kawakubo and International Program Associate Kitajima.

Prof. Ida in Lund

Prof. Ida in Uppsala

Prof. Ida in Stockholm

ACF Board Meeting

On September 5, the Alumni Club in Finland (ACF) held a board meeting where ACF board chair Kristiina Jokinen presented the Pan Nordic Alumni Club Chair Meeting to the other ACF board members. They discussed the ACF Activity Seminar that was held in August in Inari, which was a big success, and planned the upcoming ACF Board Meeting, General Assembly and All Alumni Meeting in the end of October.

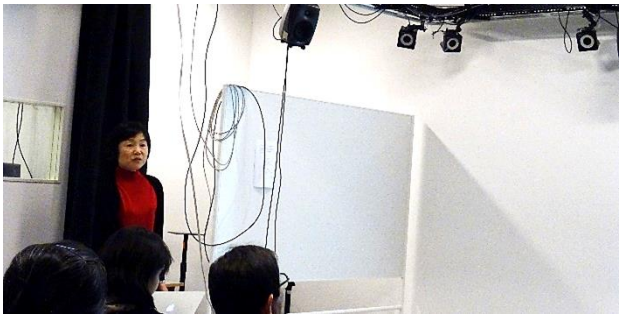
ACD Board Meeting

In September, the Alumni Club in Denmark (ACD) held a board meeting by e-mail where they discussed the FY2016 ACD Activity Seminar applications that were submitted. The board decided that the ACD Activity Seminar that will receive funding support by JSPS is “Societal Use-Cases and related Commercial Perspectives of Nano-science, with a Primary Focus on the breakthrough in 3-D Printed Micro Robots”, organized by ACD Chair Dr. Sam Kondo Steffensen and Prof. Jesper Glückstadt. The Activity Seminar is planned to be held in January, 2017.

SAC Activity Seminar: ”Music Interaction for Health – Novel Methods for Using Music Interaction to Address Wellbeing and Health Improvement in Training and Leisure

The Swedish Alumni Club (SAC) member Prof. Kjetil Falkenberg Hansen organized a SAC Activity Seminar at KTH in Stockholm on October 11. He invited Prof. Rumi Hiraga from Tsukuba University of Technology, who held a lecture titled “Working with music and hearing impaired students”. During the Activity Seminar, a variety of speakers talked about music from different perspectives – from music for health purposes to music in the public room. The first half of the seminar was held at the PMiL Lab at KTH, and the second was held at the VIC Studio. The seminar was well attended and the participants were eager and very interested in the subjects. After the last seminar, there was mingling and lively networking.

Prof. Kjetil Falkenberg Hansen



Prof. Rumi Hiraga delivering her lecture

The participants of the Activity Seminar

SAC Board Meeting

In connection with the SAC Activity Seminar on October 20, the SAC Board held a board meeting where the administrative roles of the board and JSPS Stockholm Office were discussed as well as the upcoming SAC Seminar Event in February.

SAC Activity Semiar: ”Paper Yarn in Textile and Fashion – a compostable raw material for the future”

On 20 October 2016, SAC board member Prof. Joel Peterson organized a SAC Activity Seminar at the Textile Fashion Center at the University of Borås, Sweden. Prof. Hideaki Morikawa, from Shinshu University, was invited to deliver a speech titled “The Education and Research Activities at Shinshu University”. The seminar was fully booked with nearly 100 attendants, and both professors, students and representatives from the business sector delivered lectures and showed concrete examples of their researches. After each lecture, the participants could touch and feel the different materials that were presented, and each lecture ended with many questions and discussions between the participants and the invited lecturers.

Prof. Morikawa handing out examples of Japanese paper knots

Prof. Joel Peterson thanking Prof. Morikawa for his lecture

Director Tsumoto presenting JSPS for the seminar audience

Examples of textiles made out of paper yarn

ACF Board Meeting, General Assembly and All Alumni Meeting

On 27 October 2016, JSPS Alumni Club in Finland, ACF, held a board meeting which was followed by a General Assembly in Helsinki. During the General Assembly, it was decided that the current Chair and Vice Chair will continue one more term and the activity plan of FY2017 and the reviewed Club Articles were approved. After the General Assembly, the All Alumni Meeting was held with a seminar with the theme “Academics Links between Finland and Japan”. Four speakers delivered lectures and a wide range of topics were talked about. Ms. Yukiko Nakahari from the Embassy of Japan in Finland talked about study and research opportunities in Japan. Assoc. Prof. Atsushi Ogushi from Keio University, currently living in Finland, presented his research which is studying Russia in Finland. Dr. Ayano Takeuchi from Toho University talked about risk communication toward successful offshore wind projects in Japan and lastly, Dr. Ryuichiro Higashinaka from NTT Media Intelligence Labs talked about his research and work concerning dialogue systems that can perform casual conversations as well as demonstrating a Japanese chat system. The All Alumni Meeting ended with a reception where Finnish food and refreshments were served.

ACF Chair Kristiina Jokinen

JSPS Stockholm Office Director Tadaharu Tsumoto

Ms. Yukiko Nakahari

Prof. Atsushi Ogushi

Dr. Ayano Takeuchi

Dr. Ryuichiro Higashinaka

The participants of the reception after the All Alumni Meeting

Joint SPring-8 – MAX IV Laboratory Workshop on New Light Sources and Biological Applications

Atsushi Nakagawa, Professor, Institute for Protein Research, Osaka University

Structure Biology is a scientific field that aims to reveal living systems from the atomic structures of molecules, and X-ray crystallography is one of the most powerful techniques to solve atomic structures of large biological macromolecules, such as proteins. Development of synchrotron radiation, which is a high brilliance and small divergence X-ray source from an electron (or positron) synchrotron accelerator, enables us to collect high precision diffraction data from small crystals.

SPring-8, which is a world largest synchrotron radiation facility in Japan, and SACLA, which is one of the two X-ray free electron laser facilities in the world, locates in the same campus at Nishi-Harima in Hyogo, Japan. These large facilities are leading structure biology field in the world. In Sweden, MAX IV, which is the new generation synchrotron radiation facility, has just been started to operate in this summer.

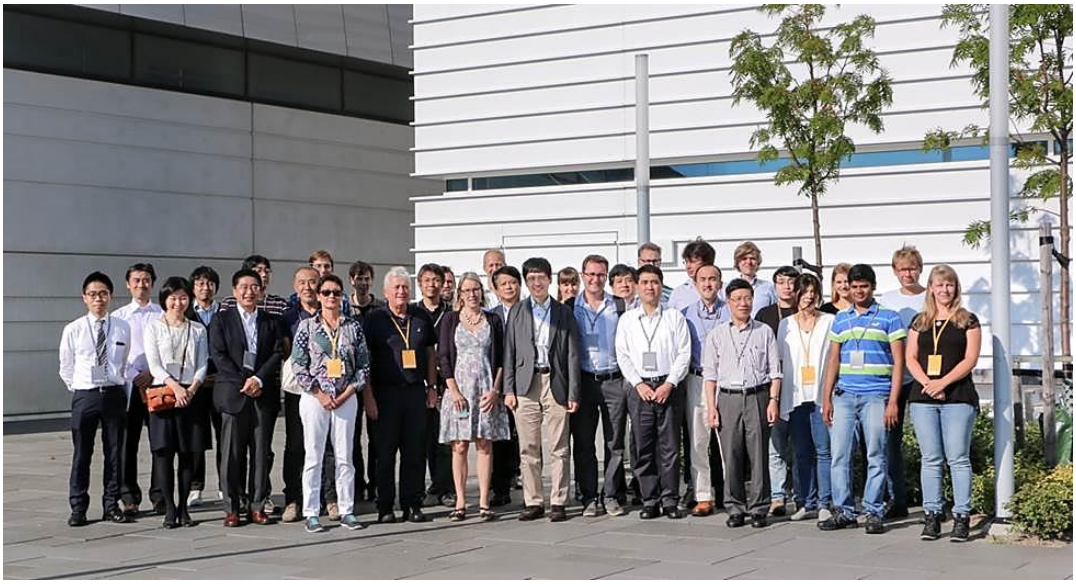
It is now a good time to promote collaboration between Japan and Sweden in the field of structure biology based on these two large facilities, and JPSP Stockholm Office kindly supported to organize the workshop entitled “Joint SPring-8 - Max IV Laboratory Workshop on New Light Sources and Biological Applications”. This workshop was organized by MAX IV Laboratory, Uppsala University, SPring-8 (Riken SPring-8 Center and the Japan Synchrotron Radiation Research Institute (JASRI)), and the Institute for Protein Research, Osaka University.

The first lecture was given by Professor Christoph Quitmann, the director of MAX IV Laboratory, about the introduction of MAX IV Laboratory which is a fourth-generation synchrotron light source with extremely low emittance and high coherency using the state-of-the-art technologies of accelerator and optics. The second lecture was given by Dr. Masaki Yamamoto of RIKEN SPring-8 Center about the current status of the beamlines for protein crystallography of SPring-8 and SACLA, which is an X-ray free electron laser facility located in the SPring-8 campus.

From MAX IV Laboratory, three speakers gave the details of the facilities, including FemtoMax, a beamline for time-resolved experiments, by Professor Jörgen Larsson of Lund University, beamlines for biological sciences by Professor Marjolein Thunnissen of MAX IV Laboratory, MAX-FEL project by Professor Sverker Werin of MAX IV Laboratory.

Three people from Japan presented their recent results using SPring-8; high-resolution structure determination to reveal water splitting mechanism of Photo System II by Professor Jian-Ren Shen of Okayama University, nucleic acid sensing mechanism by Toll-like receptors by Professor Toshiyuki Shimizu of the University of Tokyo, and ultra-high resolution crystallography revealing electron structures of protein by Professor Kunio Miki of Kyoto University.

As developments of new scientific fields of structure biology using synchrotron radiation, three lectures were presented; Dr. Takashi Kumasaka of JASRI/SPring-8 presented a new technique to collect diffraction data from protein crystals at room temperature. Dr. Ida Lundholm of Uppsala University introduced dynamic structure determination of proteins using the combination of terahertz radiation and synchrotron radiation. Professor Nobuhisa Watanabe of Nagoya University presented a new technique for ultra-high-pressure crystallography and the results of structural behavior of protein under ultra-high-pressure.



Group Photo

Recent results and future perspectives of structure biology using X-ray free electron laser were presented by five speakers; Professor So Iwata of Kyoto University presented recent development and results of serial femtosecond crystallography (SFX) at SACLA. Dr. Kenta Okamoto of Uppsala University presented structure biology of viruses using electron micrograph and X-ray free electron laser. Dr. Marvin Seibert of Uppsala University presented current status and results of SFX at LCLS (Linac Coherent Light Source) at SLAC National Accelerator Laboratory in USA. Dr. Gijs van der Schot of Uppsala University presented imaging of living cell by coherent diffraction imaging using X-ray free electron laser. In addition, Professor Esko Oksanen of ESS (European Spallation Source) introduced a plan and current status of a next generation neutron light source, ESS, for diffraction studies.

Laboratory tour for MAX IV facility was carried out in the afternoon of the second day, and all participants were impressed with the well-designed facility.

Active discussions and scientific exchanges have been made among the participants throughout the workshop. This workshop may trigger much tighter relationship between Sweden and Japan in the field of structure biology using the cutting-edge light sources, such as SPring-8, SACLA and MAX IV.

Finally we would like to deeply appreciate JSPS Stockholm Office and the people involved in this workshop.

Prof. Watanabe, Prof. Hajdu, Prof. Nakagawa and Prof Iwata at the networking session

Some of the participants at the networking session after the first day of the workshop

Deputy Director Kawakubo presenting JSPS activities

Report on the 3rd Uppsala University – Tokyo Tech Joint Symposium

Makoto Ando, Executive Vice President for Research, Professor, Tokyo Institute of Technology

Tokyo Tech aims to become one of the world's top 10 research universities by 2030, the year which will be our school's 150th anniversary. In order to achieve this goal, we are taking strong measures to advance education, research, outreach, and global activities.

We started education and research reform with new organizations and systems from April 2016. We are implementing reforms in the area of industry-academia collaboration and globalization, which will be implemented in April 2017. The Uppsala University-Tokyo Tech Joint Symposium is one of the efforts to promote academic exchanges with the world's top universities at university-level. The symposium was initiated thanks to the efforts of Professor Masako Ikegami (Tokyo Tech, School of Environment and Society), who acquired her Ph.D at Uppsala University, and Professor Gunnar Ingelman (Uppsala University, Professor of Nuclear Physics), who served as the Chairman of the Class for Physics at the Royal Swedish Academy of Sciences until 2015. The 1st symposium was held in September 2014 at Uppsala University followed by the 2nd one in November 2015 at Tokyo Tech. This year, the 3rd symposium was held on September 12 (Mon.) and 13 (Tues.) at the Ångström Laboratory of Uppsala University. The number of participants has increased with each symposium and was 106 this time. There were 40 representatives from Tokyo Tech, including the President Yoshinao Mishima and Executive Vice-Presidents, myself, 63 representatives from Uppsala University, including Vice-Chancellor Eva Åkesson, 2 representatives from the JSPS Stockholm Office, and Japanese Ambassador to Sweden Jun Yamazaki, who attended the reception. This two-day Symposium was composed of an opening session, 3 plenary sessions, 8 breakout sessions prepared for each topic, and a final wrap-up session for introducing and summarizing discussions held in each session.

Vice-Chancellor Åkesson delivers a welcome speech

At the opening session, a welcome message was given by Vice-Chancellor Eva Åkesson of Uppsala University, who expressed her expectations for enhanced cooperation and interaction in new fields. Next, President Yoshinao Mishima introduced current activities at Tokyo Tech, including reforms in education, research, and governance. This was followed by a presentation by Deputy Director Yuriko Kawakubo of the JSPS Stockholm Office, who introduced activities at the office, fellowships, and joint Japan-Sweden programs held through cooperation with STINT (The Swedish Foundation for International Cooperation for Research and Higher Education). Next, Professor Kristina Edström (Dean of Research) discussed trends in research policy of the Swedish government and the research infrastructure at Uppsala University. Finally, Professor Gunnar Ingelman discussed the importance of serendipity in basic research and examined the importance of research institutions preparing for the chance of a breakthrough.

In Plenary A (Big Data), Associate Professor Andreas Hellander of Uppsala University introduced the strategic research fields of the Swedish government and the form of cloud computing called e-Science, which provides a wide range of services and computer capabilities. Associate Professor Misako Takayasu discussed a variety of knowledge on earthquakes and tsunamis in Japan that was obtained using big data analysis. In Plenary B (Innovation and Industry Cooperation), Professor Lars Stolt of Uppsala University introduced partnerships with corporations and joint ventures as part of efforts to expand the research and production system for thin-film solar cell modules being developed at the Angstrom Solar Center. Associate Professor Kei Sakaguchi introduced global trends in 5th-generation mobile communications to prepare for a sudden increase in the volume of information communications, with particular focus on the advantages of millimeter wave technology and joint Japan-Europe projects in which Tokyo Tech is a participant.

In Plenary C (Innovative Education), the first presentation was given by Mr. Hans Nylén, Manager of Operations at the STUNS Energi which serves as a bridge organization between universities and companies. Mr. Nylén introduced programs to foster entrepreneurial spirit among students through first-hand experience in creating proposals for energy usage in the region. Professor Junichi Iijima introduced project-based learning (PBL) and acquisition of MBA credits intended to develop entrepreneurs, activities which are part of the "Cross Border Entrepreneur Cultivating Program" (CBEC).

On the afternoon of the first day and the morning of the second day, 8 breakout sessions were held in parallel to address each topic. Each breakout session used its own format to conduct discussions and presentations for topics including "Mathematics" and "Serious games and human interface" which started from the 2nd symposium held at Tokyo Tech, as well as "Digitalization," the headlining topic for the 3rd symposium. Afterwards, the wrap-up session served as an overall meeting for discussion and summary by representatives of each breakout session. Consensus was reached that securing funds for continuing activities is a major challenge.

Finally, at the closing, I reviewed the work of each breakout session and emphasized the expectations for new ideas born from interaction among researchers of both universities. Vice-Rector Johan Tysk recognized that the relationship between both universities has evolved from the initial phase of mutual understanding to the phase of specific cooperation. The Uppsala University School of Technology has been named "Upptech," and there have been proposals for interaction in research/education and holding of joint courses with Tokyo Tech.

Executive Vice-President Ando (left) and Vice-Rector Tysk (right) exchange copies of the joint inter-school agreement

A further result of our cooperation with Uppsala University was the conclusion of a joint inter-school agreement by the School of Engineering, School of Science, School of Materials and Chemical Technology, and School of Environment and Society. A welcome dinner was hosted by the JSPS Stockholm Office at the Linnaeus Garden on the first day of the symposium, and a farewell dinner was held at Varmlands Nation on the second day. Discussions during the breakout sessions and other features of the event gave participants a precious opportunity to deepen interaction. In the future, in addition to promoting substantial and continual activities, there is a plan to cooperate in the MIRAI Project being jointly conducted by Japan and Sweden.

This was the first time for me to visit Uppsala University and I was extremely impressed with the modern, open atmosphere and attitude of the campus and people affiliated with the university, even while being such a venerable university.

On October 3rd, soon after Tokyo Tech representatives returned from the symposium to Japan, it was announced that the Nobel Prize in Physiology or Medicine had been awarded to Yoshinori Ohsumi, Honorary Professor at Tokyo Tech. who attended the 1st symposium at Uppsala. This outstanding news made the journey even more memorable for Tokyo Tech participants.

In closing, I would like to express my deepest gratitude to Uppsala University and the JSPS Stockholm Office for their cooperation and support in holding the symposium.

At the reception hosted by JSPS at Linnaeus Garden. From left: President Mishima, Vice-Chancellor Åkesson And Ambassador Yamazaki. Photo reprinted from the Embassy of Japan in Sweden's homepage.

2016.08.17

Courtesy visit to Karolinska Institutet

Director Tsumoto, Deputy Director Kawakubo and International Program Associate Kitajima payed a courtesy visit to Karolinska Institutet and met with Deputy Vice-Chancellor Maria Grazia Masucci, Scientific Coordinator Ulrika Widegren and International Coordinator Dobril-Philip Petkov. The representatives from Karolinska Institutet (KI) explained about the current exchange situation between KI and Japanese universities. Then they discussed the KI Cancer Retreat that was held on September 26-27, and the future exchange plan was discussed.

2016.08.24

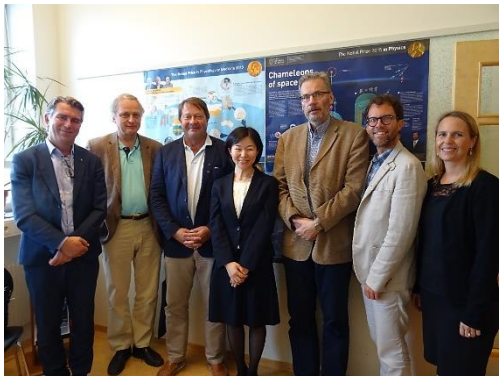
Visit to lecturer Yoko Takau Drobin, KTH

Deputy Director Kawakubo and International Associate Kitajima visited lecturer Yoko Takau Drobin who is in charge of the Japanese language and culture classes at KTH Royal University of Technology. Dr. Takau explained the exchange situation between KTH and universities in Japan, etc. and Ms. Kawakubo provided information concerning the JSPS Fellowship Programs.

2016.08.31

Visit by members from the MIRAI Project

Prof. Olov Sterner, Dean of Science of Lund University, Prof. Leif Kirsebom, Vice-Chancellor's Adviser for Internationalization of Uppsala University, Mr. Richard Stenelo, International Director and Deputy Executive Director of Lund University, Mr. Henrik Hofvendahl, Regional Manager Asia of Lund University, Ms. Ulrica Ouline, Regional Manager Asia/Africa ofUppsala University and Mr. Edvard Fleetwood, Secretary General of the Sweden-Japan Foundation visited the JSPS Stockholm Office and met with Deputy Director Kawakubo and International Program Associate Kitajima. They discussed the MIRAI Project that was initiated as a follow up to the Japan-Sweden University Presidents' Summit that was held in Tokyo in 2015, confirmed the present state between the two countries and exchanged opinions about how to proceed further with this project.



2016.09.16

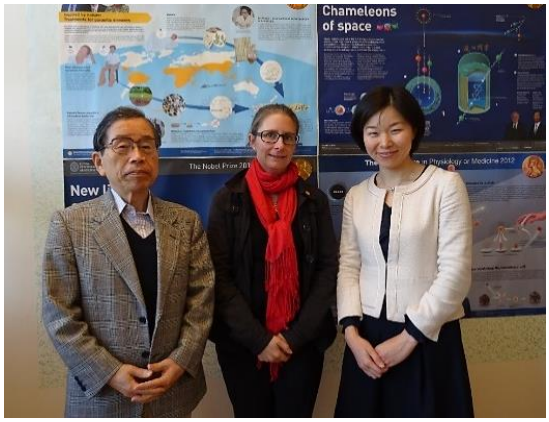
Visit by Ms. Rina Komatsu, Tokyo University of Agriculture and Technology

Ms. Rina Komatsu, doctoral student at the graduate school of engineering, office of life engineering at the Tokyo University of Agriculture and Technology visited JSPS Stockholm Office and met with Deputy Director Kawakubo and International Associate Nakakane. Ms. Komatsu is doing research in Prof. Roman Zubarev's lab at Karolinska Institutet on a short term exchange program. At JSPS Stockholm Office, Ms. Komatsu received answers to questions about life in general in Sweden and Deputy Director presented JSPS programs that can be of interest for Ms. Komatsu in the future for further research collaboration between Japan and Sweden.

2016.09.23

Visit by Ms. Lotta Lundqvist, Karolinska Institutet

Ms. Lotta Lundqvist, the international coordinator at Karolinska Institutet (KI), visited the JSPS Stockholm Office and met with Director Tsumoto, Deputy Director Kawakubo and International Associate Kitajima. Ms. Lundqvist has returned to Karolinska Institutet after having been on maternity leave, and is now in charge of KI's exchanges and cooperation with Japan. They discussed the various projects and exchanges between KI and universities and research institutions in Japan. They also confirmed some of the details regarding the KI Cancer Retreat that was held on September 26-27 at Djurönäset outside Stockholm.



2016.09.28

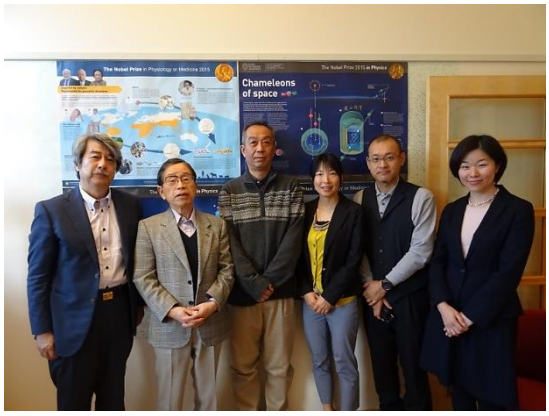
Visit by researchers and students from the University of Tokyo

Visiting Sweden to take part in the KICancer Retreat at Djurönäset held on September 26-27, Prof. Yoshinori Murakami, Prof. Mutsuhiro Takekawa and Project Associate Professor Shogo Ehata from the Graduate School of Medicine, the University of Tokyo, visited JSPS Stockholm Office together with ten students. Director Tsumoto presented the JSPS international programs and explained about the activities of JSPS Stockholm Office.

2016.09.28

Visit by representatives from the RIKEN Center for Life Science Technologies (CLST)

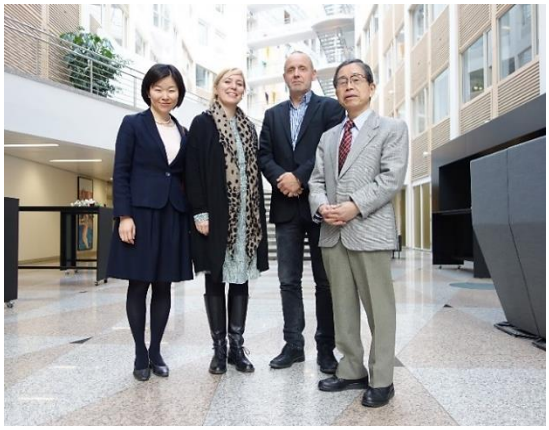
CLST Director Yasuyoshi Watanabe, Omics Application Technology Group Director Harukazu Suzuki, Chair of CLST Promotion of Research Office Yuri Mazuka and CLST Chief Science Communicator Atsushi Yamagishi visited JSPS Stockholm Office and met with Director Tsumoto, Deputy Director Kawakubo and International Associate Nakakane. The representatives from CLST visited Sweden because of "The 3rd RIKEN CLST Karolinska Institutet SciLifeLab Joint Symposium" that was held at Karolinska Institutet. They discussed the symposium, talked about the current state of RIKEN and also talked about the Swedish society.



2016.10.14

Visit to the Research Council of Norway and Participation at MEXT Alumni Gathering

Director Tsumoto and Deputy Director Kawakubo visited the Research Council of Norway (RCN) in Oslo and exchanged ideas and opinions on future exchange plan. On the same day, the MEXT Alumni Gathering was held for Alumni of the Japanese Government (MEXT) Scholarship, which was organized by the Embassy of Japan in Norway, and Director Tsumoto offered his greetings after having been introduced by Ambassador of Japan in Norway, Toshio Kunikata.



2016.10.25

Visit by Prof. Tomoko Nakanishi, The University of Tokyo

Prof. Tomoko Nakanishi from the Graduate School of Agricultural and Life Sciences, The University of Tokyo, and commissioner at the Japan Atomic Energy Commission visited JSPS Stockholm Office. JSPS Stockholm Office expressed our gratitude for her lecture at the JSPS Alumni Club in Sweden 10-Year Anniversary Symposium that was held in January 2016 as well as for her great contribution to invite the keynote speaker, Prof. Emeritus Kojiro Nishina, to the seminar. JSPS Stockholm Office also discussed Prof. Nakanishi's current research activities during the meeting.

Ten years of Japanese awardees

Oskar Nielsen, JSPS Stockholm Office Assistant

The Ig Nobel Prize goes to improbable research that at first makes you laugh. Over the past years it has become a big hit in the scientific community and in the entire world as well. The 2016 Ig Nobel Prize award ceremony was held on September 22 at Harvard University in the U.S. with laureates from all over the globe. This year, Prof. Atsuki Higashiyama from Ritsumeikan University and Prof. Kohei Adachi from Osaka University were awarded the prize in the perception category for their study that has investigated whether things look different when you bend over and view them upside down with you head between your legs. Prof. Higashiyama and Prof. Adachi published the results of their research in the academic journal Vision Research with the title "Perceived Size and Perceived Distance of Targets Viewed From Between the Legs: Evidence for Proprioceptive Theory". Their research found that shifting body posture does affect visual perception.

This year is actually the tenth year in a row that Japanese scientists were awarded at the Ig Nobel Awards Ceremony. (The first time the Ig Nobel Prize was awarded to Japanese scientists was in 1992, one year after the inauguration of the prize.)

Both the Ig Nobel ceremony and the awards do have a humorous side to them, but it is a prize that is awarding actual science. The Ig Nobel group wants to make people curious, make them laugh and then make them think. They put science in a different perspective with what is considered important research and what is not. They apply this perspective both to science as well as to other fields.

Sources:
http://www.improbable.com/ig/winners/
http://www.forbes.com/sites/prossermarc/2016/09/26/10-years-10-prizes-japanese-scientists-scoop-ig-nobel-prize-for-bending-over/#7e61c2c15bc3

< Japanese Ig Nobel winners over the past 10 years >

2016
Perception Prize
Atsuki Higashiyama and Kohei Adachi (Japan), for investigating whether things look different when you bend over and view them between your legs.

2015
Medicine Prize
Awarded jointly to two groups: Hajime Kimata (Japan); and to Jaroslava Durdiaková, Peter Celec, Natália Kamodyová, Tatiana Sedláčková, Gabriela Repiská, Barbara Sviežená, and Gabriel Minárik (Slovakia), for experiments to study the biomedical benefits or biomedical consequences of intense kissing (and other intimate, interpersonal activities).

2014
Physics Prize
Kiyoshi Mabuchi, Kensei Tanaka, Daichi Uchijima and Rina Sakai (Japan), for measuring the amount of friction between a shoe and a banana skin, and between a banana skin and the floor, when a person steps on a banana skin that's on the floor.

2013
Medicine Prize
Masateru Uchiyama (Japan), Xiangyuan Jin (China, Japan), Qi Zhang (Japan), Toshihito Hirai (Japan), Atsushi Amano (Japan), Hisashi Bashuda (Japan) and Masanori Niimi (Japan, UK), for assessing the effect of listening to opera, on heart transplant patients who are mice.

Chemistry Prize
Shinsuke Imai, Nobuaki Tsuge, Muneaki Tomotake, Yoshiaki Nagatome, H. Sawada, Toshiyuki Nagata and Hidehiko Kumagai (Japan), for discovering that the biochemical process by which onions make people cry is even more complicated than scientists previously realized.

2012
Acoustics Prize
Kazutaka Kurihara and Koji Tsukada (Japan), for creating the SpeechJammer – a machine that disrupts a person's speech, by making them hear their own spoken words at a very slight delay.

2011
Chemistry Prize
Makoto Imai, Naoki Urushihata, Hideki Tanemura, Yukinobu Tajima, Hideaki Goto, Koichiro Mizoguchi and Junichi Murakami (Japan), for determining the ideal density of airborne wasabi (pungent horseradish) to awaken sleeping people in case of a fire or other emergency, and for applying this knowledge to invent the wasabi alarm.

2010
Transportation Planning Prize
Toshiyuki Nakagaki, Atsushi Tero, Seiji Takagi, Tetsu Saigusa, Kentaro Ito, Kenji Yumiki, Ryo Kobayashi (Japan), and Dan Bebber and Mark Fricker (UK), for using slime mold to determine the optimal routes for railroad tracks.

2009
Biology Prize
Fumiaki Taguchi, Song Goufu and Zhang Guanglei (Japan), for demonstrating that kitchen refuse can be reduced more than 90% in mass by using bacteria extracted from the feces of giant pandas.

2008
Cognitive Science Prize
Toshiyuki Nagaki, Hiroyasu Yamada, Ryo Kobayashi, Atsushi Tero, Akio Ishiguro (Japan) and Ágotá Tóth (Hungary), for discovering that slime molds can solve puzzles.

2007
Chemistry Prize
Mayu Yamamoto (Japan), for developing a way to extract vanillin – vanilla fragrance and flavouring – from cow dung.

Nordic Researchers on Greenland

Even though climate change is a very critical issue, there are some advantages that researchers can take from it and turn into meaningful research. A lot of it has to do with the melting glaciers of Greenland.

Anders Bjørk from the Natural History Museum of Denmark in Copenhagen and his colleagues are doing both field work to Greenland and studying old maps, photographs and documents. They are combining old records from the nineteenth century to show how the glaciers and ices on Greenland have moved and behaved over the past century. By doing this, they gain crucial information for climate scientists who are trying to predict how the ices and glaciers on Greenland might change in the future.

Bjørk has collected more than 180,000 aerial photographs from many different expeditions from the nineteenth and twentieth century, but he has been paying particular attentions to the images from the 1930s, since the earth was going through a warm period that shares some similarities with the present.

The students of Bjørk's research group are marking boulders, cliffs and other recognizable features that can be spotted in photographs taken many decades apart. These markings become control spots, which make it possible for the researchers to match pictures taken from different angles and altitudes, and through these pictures they can measure the glaciers' advances and retreats. They are mixing traditional geology and expedition-era geography with modern high-tech data.

The first set of findings suggest that Greenland's ice has responded more strongly to past climate changes than previously realized. The next task for the researchers is now to try to unravel what factors within the oceans, atmosphere and inside the glaciers control their behavior.

Bjørk says that glaciers are more sensitive to warmings and coolings than researchers have thought before, but it is still a mystery why there are some glaciers that are more sensitive than others and others that are less. However, researching the past behavior of the ices and glaciers of Greenland helps a lot when it comes to predicting the future.

And as some researchers are researching the melting ices, other researchers are looking at what has been hiding beneath all the ice that has melted away. Researchers from Denmark and Sweden have found the oldest sign of life that has ever been observed. In a 3.7 billion years old rock in the Isua belt on Greenland, they found traces of a unicellular life form in a small area that was revealed as a result of melting ice. In the rock that was found, there is no cellular or biological remnants, but it contains structures that looks like stromatolites, which are petrified layers of fossil microorganisms.

The discovery on Greenland proves that there was microbiotic – unicellular – life in the shallows seas on the earth 3.7 billion years ago. This discovery is one important piece in the puzzle of the beginning of life on earth.

Sources:

"The Ice Historians", *Nature*, vol. 535, p. 481-483, 28 July 2016

http://www.svt.se/nyheter/vetenskap/varldens-aldsta-fossil-pa-gronland

A Greenland fjord. Photo by Barni1 (https://pixabay.com/sv/isberg-fjord-gr%C3%B6nland-arctic-iced-889770/)

Communicating Robots

Between September and December, visitors at Tokyo International Airport at Haneda, can turn to robots when in need of guidance. Hitachi Ltd. are currently doing a proof-of-concept test on two small humanoid EMIEW3 robots, who can help the airport visitors in both Japanese and English. So far, Hitachi have tried if the robots can catch up words in the loud noises of a crowded and busy airport, and it was shown in the first trials that the robots managed to help the person in need, with some small delays. Hitachi are doing this trial in order to improve the robots so that they will be used commercially around 2018, in order to serve foreigners visiting Japan during the 2020 Tokyo Olympics and Paralympics.

At the museum Miraikan in Tokyo, a similar test has been done between July and October of 2016, using a robot named CommU. Japan is a rapidly aging society where few children are born. Since there will be fewer and fewer people who can take care of the elderly, there might be a need for robots. Robots might be able to help aged people with the basic needs such as getting dressed, washing and other physical activities, but one thing that is equally as important is communication. Prof. Hiroshi Ishiguro and Prof. Yuichiro Yoshikawa at the Osaka University Graduate School of Engineering Science are the scientists who developed CommU. They are trying to improve a robot that will be able to hold a normal dialogue with people. In robotic research, there are robots that are able to hold one to one conversations, understand voices as well as being equipped with artificial intelligence. However, it is hard to make people feel that the robots are participating in conversations, and that is what Prof. Ishiguro and his team are trying to solve.

The CommU robot moves its head, eyes and arms to make a better expressive experience for the participants in the dialogues with it. Using the robot in an interactive experiment at Miraikan, Prof. Ishiguro can improve the robot's communicating skills and make the research proceed, as all visitors' interactions with the robots are being recorded and then analyzed.

Sources:
http://www.jst.go.jp/seika/extra.html#M09
http://the-japan-news.com/news/article/0003191185

ESS Data Management and Software Centre to Open in Copenhagen

The European Spallation Source (ESS) facility in Lund, Sweden, is the most advanced neutron spreading facility in the world and was inaugurated earlier this year. On August 26, 2016, the ESS Data Management and Software Centre (DMSC) opened in Copenhagen. The DMSC will store, handle and analyze the research data that comes from the experiments conducted at ESS in Lund, and the centre will also assist the researchers.

Many companies and researchers are expected to be attracted to work and research in the Öresund region in eastern Denmark and southern Sweden, with the ESS as a leading global facility in the region – especially companies and researchers in the areas of materials technology and life sciences.

Approximately 500 people will be employed at ESS, and by the mid-2020s the DMSC is expected to have about 65 employees. However it is not just these two facilities that will be profitable for the Öresund region. Large research facilities, such as the ESS, have been proven through international experiences, to help the creation of growth and employment rates of the host region. Large international research facilities have shown to have the potential to create and develop the host region's knowledge and innovation systems. The Danish Minister for Higher Education and Science Ulla Tørnæs says that both Danish and international researchers and companies will benefit from this new data centre, which will create a framework for groundbreaking research in such areas as cancer treatment, materials technology and life sciences.

Source:
http://crds.jst.go.jp/dw/20161007/201610079758/
2ufm.dk/en/newsroom/press-releases/2016/pivotal-data-centre-opens-in-Copenhagen

Photo by News Øresund – Anna Palmehag

Japanese Astronomers Find Oxygen in Early Galaxy

A team that was led by Associate Professor Akio Inoue at Osaka Sangyo University in Daito, Japan, has discovered oxygen in a galaxy that is 13 billion years old. This is the first time that oxygen has been found in such an early stage of the universe. The Japanese team used the Atacama Large Millimeter/submillimeter Array (ALMA) in Chile to make their research about the chemical construction of the old galaxy that was discovered back in 2012. In the galaxy they analyzed, they found that the levels of oxygen was only one-tenth of the levels in the Sun of our solar system. The galaxy also seemed to be low in neutral gas and dust, which might have caused ultraviolet light from the stars of this galaxy to escape and ionize the hydrogen atoms in the early universe, and thus generating the ion levels that have been observed today.

Source:
Nature, Vol. 534, 23 June 2016, p. 438

Researcher at Umeå University Served a World First (?) CRISPR Meal

This year, it has been the first time a plant has been gene-edited using the CRISPR-Cas9* technology. It is also the first time a plant like this has been cultivated outside of a laboratory. This was done by Prof. Stefan Jansson at the Department of Plant Physiology at Umeå University in Sweden – the university where the CRISPR-Cas9 technology was discovered back in 2012. Prof. Jansson planted these CRISPR plants in a pallet collar in a garden outside the city Umeå in northern Sweden. Having invited a reporter from the Swedish Radio, they harvested and cooked a meal with a gene-edited cabbage plant. The served meal was "Tagliatelle with CRISPRy fried vegetables".

This was the first time eating a CRISPR-Cas9 edited plant in Europe, and even if it has been done in other parts of the world, it is nothing that has been made public. It is up to debate whether using CRISPR in agriculture will be allowed or if it falls under the Genetically Modified Organism (GMO) legislation. The Swedish Board of Agriculture has interpreted the law as being different from the GMO law. That is, it differs in the way that rather than adding foreign DNA in an organism, you cut out a piece of the existing DNA, or edit it. That is why the Swedish Board of Agriculture does not regard CRISPR-Cas9 editing as GMO, and therefore no prior permission to cultivate CRISPR edited plants is needed.

CRISPR-Cas9 is predicted by many to revolutionize for example medicine. The first clinical applications are on their way and this technique will be of great help when trying to cure e.g. hereditary diseases. The CRISPR technology is the future of medicine and, if it will be globally accepted and legalized, even agriculture.

* The CRISPR-Cas9 technology enables geneticists and medical researchers to edit parts of the genome by removing, adding or altering sections of the DNA sequence. It is currently the simplest, most versatile and precise method of genetic manipulation.

Sources:
http://www.teknat.umu.se/english/about-the-faculty/news/newsdetailpage/umea-researcher-served-a-world-first----crispr-meal.cid272955
http://www.yourgenome.org/facts/what-is-crispr-cas9

The CRISPR dinner in the making. Photo by Stefan Jansson (https://mediabank.umu.se/share/2d33e550acf6e28089038752c7f16d92)

Japan's Sun Observatory Hinode Celebrates 10 Years in Space

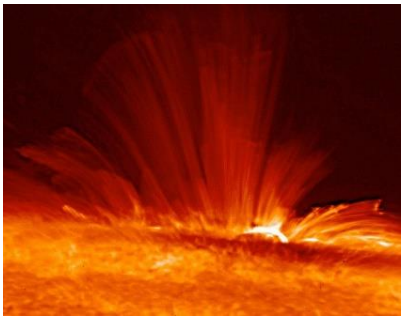
The sun-observing satellite Hinode was launched into space on September 23, 2006, as an international mission led by the Japan Aerospace Exploration Agency (JAXA) in collaboration with NASA and other partners. During those ten years, Hinode has delivered spectacular imagery and invaluable measurements of our sun. It has provided us with outstanding views of violent solar flares, eruptions and much more.

The satellite Hinode is traveling around the Earth in a sun-synchronous orbit, and is named after the Japanese word for "sunrise". The satellite is equipped with three advanced scientific instruments: the Solar Optic Telescope, X-ray Telescope and Extreme Ultraviolet Imagining Spectrometer so that it can measure the sun's magnetic field and get close-up views of the sun.

Analyzing the satellite's data, scientists can use Hinode's measurements to learn about how energy is released in the form of violent solar fares or eruptions. The scientists can also study the generation, transport and dissipation of magnetic energy from the lower solar atmosphere to the upper.

During these 10 years, Hinode has revealed – and will keep on revealing – a lot of new solar secrets and remarkable images of our closest star.

Source:
http://www.space.com/34114-hinode-sun-observatory-10th-anniversary-video.html
Source of image:
http://www.nasa.gov/mission_pages/hinode/gallery.html#lowerAccordion-set2-slide13



One of the first images captured by the Hinode Satellite back in 2006, showing that the sun's magnetic field was much more turbulent and dynamic than previously known. Credit: Hinode, JAXA/NASA

The Swedish Research Council's Research Barometer

The Swedish Research Council has published their new report called "the Research Barometer" that is completed with interactive figures in an online version. The Research Barometer gives an overall picture, material and data about the strengths and weaknesses of Sweden as a research nation, e.g. research financing, staff at universities and scientific publication. The focus is on the public funding of research and research performed at higher education institutions.

The Research Barometer of 2016 shows that the Swedish investments in research and development keeps on being some of the highest in the world. Also the number of researchers, publications, citations, international collaborations, show that Sweden is a successful research nation. But the business sector's research and development investments have decreased and when it comes to highly cited articles, there are several other countries that have had a stronger development in the past few years.

The Research Barometer provides an overview of the Swedish research system in comparison with systems around the world. It is still new and is being developed continually, so that the Swedish Research Council can identify the most relevant indicators to be able to measure changes and follow the development of the research system. They are planning to update the Research Barometer every second year. The next uptaded version will be published already in 2017.

Sources:
http://www.vr.se/inenglish/newspress/newsarchive/news2016/swedishresearchbarometer2016.5.3c90cb53157d272286d13e8c.html
http://www.vr.se/nyheterpress/vrkommenterar/vrkommenterar/nulanserarviforskningsbarometern.5.7cdb941b15550dc398378bca.html

6. Notice

Upcoming Seminars and Symposia

IVA-JSPS Seminar

Date: January 24, 2017, 17:30-19:00
Venue: IVA, Stockholm
Keynote Speaker: Prof. Hiroshi Ishiguro, Osaka University, Graduate School of Engineering Science, Department of Systems Innovation
Moderator: Danica Kragic Jensfelt, IVA
Title: Studies on humanlike robots

JSPS ACD Activity Seminar

Preliminar title: "Societal Use-Cases and related Commercial Perspectives of Nano-science, with a Primary Focus on the breakthrough in 3-D Printed Micro Robots"
Date: January 25-26, 2017
Venue: Danish Technical University, Executive School of Business, Lyngby, Denmark

The 5th Sweden-Japan Academic Network

Date: February 23, 2016
Venue: KVA, Stockholm

Nobel Prize Dialogue Tokyo

Exploring scientific and cultural perspectives on intelligence
On 26 February a unique panel of thought leaders including Nobel Laureates will meet at Tokyo International Forum to discuss challenges and opportunities in light of the new frontiers of human and artificial intelligence.
This free whole-day conference brings together Nobel Laureates, world-leading scientists, policy makers and the general public will join in an inspiring event, moving science and society closer together. Nobel Prize Dialogue Tokyo 2017 is produced by Nobel Media in cooperation with the Japan Society for the Promotion of Science (JSPS).
Date: February 26
Theme: The Future of Intelligence
Registration opens in December 2016.
More information:
www.nobelprizedialogue.org/tokyo2017

Please find more information on http://www.jsps-sto.com/activities.aspx

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Cover: Autumn in Kyoto

By Oskar Nielsen

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