



JSPS Stockholm Newsletter

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Contents	Page
Prologue	2-3
News	4-8
Reports	9-17
Column	18
Message from the Alumni Club Chair	19-20
Reports from Japanese Researchers in the Nordic/Baltic Nations	21-22
Academic Information	23-25
Notices	25-26

The Academic and Fiscal Year System of Japan

Tadaharu Tsumoto, Director, JSPS Stockholm Office

I am writing this prologue in the first week of April ahead of its publication. April is a very special month to most Japanese. In the first week of April the first term or semester begins in almost all schools in Japan, and the new fiscal or financial year starts in the governmental organizations/agencies and private sector companies/corporations in Japan. Also our office, although not located in Japan, has welcomed new staff (see page 3 of this newsletter). So, many Japanese have memories that new lives in schools, governmental organizations and companies started in April. In addition, the first week of April is the time when cherry trees are in full blossom in many areas of Japan. Therefore, some Japanese feel as if cherry blossoms blessed the beginning of their new lives.

I have a guess that most of overseas non-Japanese people may not exactly understand such a feeling of Japanese about the month of April. Once non-Japanese people are involved in activities of Japanese societies or organizations, however, they are probably faced with the Japanese academic and fiscal year system that starts from April 1st and ends on March 31st. For example, most of the fellowships or collaboration programs not only of JSPS but also of other Japanese funding agencies often have effective terms starting from April 1st and ending on March 31st. Even if any program starts later than April, it usually should finish on March 31st of the next or later year.

In Japanese universities it is widely recognized that such an academic year system in Japan may be a barrier or hindrance to internationalization. In many countries including Sweden, the academic year starts in September so that, for example, credits of lectures in the undergraduate or graduate courses are not easily exchangeable or interchangeable between Japanese and non-Japanese universities. Based on the recognition of this difference in the academic year system, the University of Tokyo and some other universities in Japan seriously considered to

change the starting month of the academic year from April to September several years ago. This consideration raised hot controversial arguments among administrators, professors and students of Japanese universities. Now such a discussion seems to subside. In the course of discussion, many people have realized that such a change is practically very difficult and even not beneficial to their own universities because now the April-March academic year system has so firmly taken root in Japanese society. To implement such a new system, for example, it should accompany the same change in senior and junior high schools and also in elementary schools. Also grads from universities, if they graduated in July, could not immediately work in Japanese companies where the April-March fiscal year system is mostly adopted. These are just examples for difficulties in the implementation of the above-mentioned change in the academic year system.

Thus, most Japanese universities seem to give up the realization of the September-July academic year system. Nevertheless, I have found that the substantial number of universities in Japan and Europe managed to modify the credit system of lectures of graduate courses to develop and establish the double or joint degree programs. In the Forum of the Japan Academic Network in Europe (JANET) that was held in Freiburg, Germany on 23 November 2017 (<https://www.facebook.com/JANET.Europe/>), I learned that many collaborative programs between some universities in Japan and Europe are running to realize the double/joint degree system. Now it becomes clear that the difference in the academic and fiscal year system is not an absolute barrier to promoting the international collaboration in research and higher education between Japanese and non-Japanese universities, although some clever and adaptive modifications of their own systems are required.



Photo: greymatters/Pixabay

Welcome new staff members!

Mr. Tatsuya Ishida, International Program Associate

I am Tatsuya Ishida and I have started working at the JSPS Stockholm Office from this April. I am from Hiroshima University in Japan. My university has connected with some Swedish universities through the MIRAI project. I also personally feel a bond with this country because I was in charge of a symposium related to the Nobel Prize at the JSPS Tokyo headquarters, where I worked for a year and a half before coming here.

I would like to promote and establish friendships with Sweden and Nordic/Baltic countries through my work and life in Sweden for a year.

Ms. Akie Igei, International Program Associate

Hello! This is Akie Igei, International Program Associate at the JSPS Stockholm Office. I come from the University of the Ryukyus in Okinawa, which is located in the southern part of Japan.

This is my first time to live in Sweden, and I am really enjoying this beautiful townscape. I also look forward to seeing you at some JSPS events soon!



Mr. Ishida and Ms. Igei



Sweden-Japan 150-Year Anniversary: The 6th Sweden-Japan Academic Network

On February 14, the 6th Sweden-Japan Academic Network was organized by the Royal Swedish Academy of Sciences (KVA), the Embassy of Japan in Sweden, and JSPS Stockholm Office. This event was recognized by the Embassy of Japan in Sweden as part of its official commemorations for the 150-year anniversary of diplomatic relations between Sweden and Japan, and from our office, Director Tsumoto, Deputy Director Yoshihara, International Program Associate Okamoto, Office Assistants Tashima and Granström participated. The event was held at KVA, and opening remarks were given by Prof. Martin Jakobsson, Vice President of KVA. Director Tsumoto continued by introducing the JSPS programs and activities, encouraging participants to apply.

The first lecture was given by Prof. Imre Pázsit, Chalmers University of Technology, titled “Being Both Similar and Different: the Case of Nuclear in Sweden and Japan.” Prof. Pázsit’s detailed report of the event can be found on page 12.

The second lecture was given by Docent Atsuto Maki, KTH Royal Institute of Technology, titled “Towards Replicating Our Visual Function: Approaches with Machine Learning.” Docent Maki’s report can be found on page 13.

The lectures were then followed by a reception and H.E. Ambassador Jun Yamazaki’s speech, where he offered a toast to celebrate the 150-year anniversary.

The event was successful and attracted 63 participants, including Japanese researchers in Sweden, JSPS alumni, Swedish students, researchers and others interested in academic collaboration between the two countries.



Prof. Pázsit answering a question from the audience



Docent Maki during his lecture



Participants preparing for the Ambassador’s toast

Sweden-Japan 150-Year Anniversary: Meeting Point Japan 2018

On February 19, Meeting Point Japan 2018 was held at Stockholm School of Economics in central Stockholm. This gathering was recognized by the Embassy of Japan in Sweden as part of its official commemorations for 150th anniversary, and JSPS Stockholm Office was one of the cooperative organizations. From our office, Director Tsumoto and Deputy Director Yoshihara participated. Key players from the industry such as Mr. Toshiyuki Shiga of Nissan Motor Co., Ltd. and Innovation Network Corporation took to the stage to speak about why innovation is key to the future success of Japanese Industry. Mr. Jacob Wallenberg, Chairman of Investor AB, discussed how both Japan and Sweden can strengthen their competitiveness by further cooperating and innovating. Then, Mr. Carl Lagercrantz, Chairman of the Board at Northvolt AB, talked about the building of Europe's largest lithium-ion battery factory, a big Swedish-Japanese industrial cooperation project. H.E. Ambassador Jun Yamazaki of Japan to Sweden and H.E. Ambassador Magnus Robach of Sweden to Japan, presented some of the grand events that will take place in Sweden and Japan during this year of 150-year diplomatic relation celebrations. Finally, Mrs. Cecilia Leiram, Trade Commissioner Japan of Business Sweden, talked about the future of Swedish-Japanese business relations. After the event, the participants enjoyed the reception with mingling and networking.



Mr. Shiga



Mr. Wallenberg

Japan Alumni and Researcher Assembly in Denmark

On February 23, the Japan Alumni and Researcher Assembly 2018 was held at the University of Copenhagen in Denmark. It was jointly organized by the Embassy of Japan in Denmark, JSPS Alumni Club in Denmark (ACD), Tokai University Alumni Association in Denmark and JSPS Stockholm Office. The event consisted of three sessions; presentations, a panel discussion and a reception.

Following the opening remarks by H.E. Ambassador Toshiro Suzuki of Japan to Denmark, and a presentation by Director Tsumoto from the JSPS Stockholm Office, two keynote lectures were held. Prof. Masami Isoda, University of Tsukuba, held a lecture titled "Japanese Lesson Study Abroad – International Development of Education." Please find a report by Prof. Isoda on page 14. Then, Mr. Stefan Sakurai, Japan Representative Director of LEO Pharma, held a lecture titled "LEO Open Innovation in Japan - An Open Invitation for R&D Innovation."

The second session consisted of a newly introduced, for fiscal year 2017, panel discussion which received great feedback and included a lot of interaction with the audience. The panel discussion was titled: "Higher Education and Industry: Strengths and Weaknesses of Current Interactions and Danish/Japanese Perspectives on What is Needed in the Future." Attending the panel were panelists: Prof. Isoda, Dr. Anemone Platz (Aarhus University), Mr. Sakurai, Prof. Carl Winsløw (University of Copenhagen) and Dr. Koji Kimita (Technical University of Denmark (DTU)/Tokyo Metropolitan University). The panel discussion was moderated by Prof. Maher Abou Hachem (DTU). The event finished with a mingling session where ACD Chair Prof. Winsløw proposed a toast. The participants could mingle over food and drinks to celebrate a successful event.



Panelists from left to right: Mr. Sakurai, Prof. Winsløw, Dr. Kimita, Dr. Platz and Prof. Isoda

Sweden-Japan 150-Year Anniversary: Hokkaido University – Umeå University Exchange Seminar

On February 28 to March 1, Hokkaido University - Umeå University exchange seminar was held at Umeå University. This event was recognized by the Embassy of Japan in Sweden as part of its official commemorations for 150th anniversary. From our office, Deputy Director Yoshihara and Office Assistant Granström attended. The first day started with the opening ceremony, and welcoming the guests with opening remarks were: Umeå University's Vice-Chancellor Hans Adolfsson, Hokkaido University's Vice President Ko Hasegawa, First Secretary of the Embassy of Japan in Sweden Akira Suzuki and JSPS Stockholm Office's Deputy Director Yoshihara. Following this was a presentation by Secretary General Edvard Fleetwood of Sweden-Japan Foundation (SJF) on the historical background in Swedish-Japanese diplomatic relations.

The seminar then continued with the four presentations with two general themes. "Indigenous Studies" represented by Prof. Hirofumi Kato from Hokkaido University and Dr. Kristina Sehlin Macneil from Umeå University, and "Arctic Studies" represented by Prof. Natsuhiko Ohtsuka from Hokkaido University and Dr. Gabriella Nordin from Umeå University. Deputy Director Yoshihara together with representatives from the respective universities followed up the presentations with information regarding research funding opportunities. The first day closed with a social gathering and guided tour around Umeå University campus, and the next day was followed by presentations and discussions.



Umeå University Vice-Chancellor Adolfsson



Hokkaido University Vice President Hasegawa

Sweden-Japan 150-Year Anniversary: Nobel Prize Dialogue Tokyo 2018

On March 11, the Nobel Prize Dialogue Tokyo was arranged by Nobel Media AB and JSPS for the 3rd time in Japan. Nobel Laureates, world-leading scientists, key opinion leaders, policy makers, and other world renowned experts met with students, researchers and the general public to discuss "The Future of Food."

Opening remarks were given by Yuichiro Anzai, President of JSPS, Lars Heikensten, Executive Director of the Nobel Foundation, and Yoshimasa Hayashi, Minister of Education, Culture, Sports, Science and Technology. From JSPS Stockholm Office, Director Tsumoto and Deputy Director Yoshihara attended.

The event was a success with several inspiring lectures and fascinating panel discussions on topics such as the "Science and Food", "Culture and Food" and "Future Food and our Challenges for the Sustainability", with participating Nobel Laureates such as Yoshinori Ohsumi, Laureate in Physiology or Medicine 2016, Finn E. Kydland, Laureate in Economic Sciences 2004, Tim Hunt, Laureate in Physiology or Medicine 2001, and many more.



Prof. Ohsumi, 2016 Nobel Laureate in Physiology or Medicine



President Anzai, JSPS



Deputy CEO Sprechmann,
Nobel Media AB

Welcome the New President of JSPS: Dr. Susumu Satomi



President Satomi
Photo: Tohoku University

On April 1, Dr. Susumu Satomi took office as the new President of JSPS. Dr. Satomi was previously the 21st President of Tohoku University.

The staff of the JSPS Stockholm Office would like to welcome and wish Dr. Satomi good luck on his new position as the JSPS President. We are looking forward to working with him and hope to meet him in Sweden soon.

The former President of JSPS, Dr. Anzai, has now moved on to the position as the Senior Advisor of JSPS, and as Director of the Center for Science Information Analysis. We would like to thank Dr. Anzai for his contributions to JSPS and wish him the best of luck as well.

Gathering for Japanese Researchers Held in Stockholm

On April 20, a gathering for Japanese researchers living in Sweden was held at a restaurant in Stockholm. The gathering was organized by First Secretary Suzuki, the Embassy of Japan, and Deputy Director Yoshihara, JSPS Stockholm Office.

The gathering was held for the fourth time, and its purpose is to provide an opportunity to further strengthen the ties between the researchers, as well as welcome those who have newly arrived in Sweden.

After the welcome remarks from Director Tsumoto, each participant briefly introduced themselves and their field of research. After that, the participants could enjoy dinner and casual talk among each other.

The gathering was a success and attended by 22 Japanese researchers/students, and 7 staff members.



Participants introducing themselves



Group photo

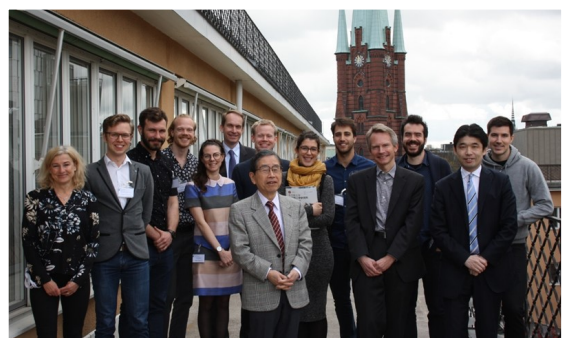
JSPS Summer Program Pre-Orientation Held in Stockholm

On April 27, the JSPS Summer Program Pre-Orientation for this year's participants was held at the Swedish Foundation for International Cooperation in Research and Higher Education (STINT). STINT is the Swedish nominating authority for the JSPS Summer Program, and the purpose of this event was to inform and prepare the participants for their upcoming research stay in Japan.

The opening remarks were given by Dr. Andreas Göthenberg, Executive Director of STINT, followed by the self-introductions of each participant. Further, Deputy Director Yoshihara explained the program's overview and informed necessary preparations prior to travel. Next, participants from the 2017 JSPS Summer Program gave presentations on their experiences of the program and answered questions.

Finally, Director Tsumoto and Dr. Göthenberg conducted each a presentation of the respective organizations and activities, and Director Tsumoto closed the pre-orientation with words of encouragement.

The pre-orientation ended with following lunch where participants could enjoy exchanging information in a relaxed atmosphere.



Group photo

SAC Joint Board Meeting and General Assembly

On February 14, the JSPS Alumni Club in Sweden (SAC) held a joint Board Meeting and General Assembly at the Royal Swedish Academy of Sciences (KVA). Director Tsumoto, Deputy Director Yoshihara and Office Assistant Granström joined them.

The board members discussed the applications of the SAC Activity Seminar FY2018 and it was agreed that a selection among the proposals was to be made by March.

Following the board's discussion on activity seminars, fellow alumni club members were invited to join the General Assembly where the Chair Prof. Göran Thor reported the alumni club's activities during the FY2017. Prof. Thor then presented the preliminary activity plan for FY2018 to which the participants expressed their views and ideas. New members were also announced and welcomed to the club.



Group photo of the participants

ACD Board Meeting and General Assembly

On February 23, the JSPS Alumni Club in Denmark (ACD) held a Board Meeting and General Assembly at the University of Copenhagen. Director Tsumoto, Deputy Director Yoshihara and Office Assistant Granström joined. The participants discussed the outline for FY2017. This was followed by electing a new board member, Associate Professor Gunhild Borggren, as Dr. Sam K. Steffensen has resigned from his position in the board. Lastly, there was a discussion among the members of future activities and plans.



Group photo of the participants

“International Collaboration on Changing Antarctic Ice Sheet” **Presented at the Norway-Japan Academic Network of FY2017**

Kenichi Matsuoka, Senior Researcher, Norwegian Polar Institute

It's a great fortune for me to present my research in Antarctic glaciology at the second Norway-Japan Academic Network held at the Research Council of Norway in January this year. This conference is to gather researchers and students who are working on, or interested in, collaborative research with Japan. It was the first time for me to meet most of the 42 participants of the meeting, so this was a great opportunity for my networking. Although I am a Japanese and grew up in Japan until I received my PhD, I worked in the USA and Norway for 15 years and recently, I frequently forget to bring my “meishi” (business cards) to conferences. It is quite impressive that many Norwegians exchange “meishi” much more smoothly than me. It is not a trivial but a great reflection of mutual understanding of culture.

My talk was focused on recent hot topics in Antarctica, in the context of global warming and sea-level rise. Antarctica is about 35 times larger than Norway and Japan by size and covered by 2-km thick ice on average. Because the air temperature is low, most ice flowing out from the Antarctic Ice Sheet remains as a continued body of the ice sheet and floats on the ocean, which is called ice shelves. Ice shelves already contributed to the sea level rise (as it is afloat), but it is one of controlling factors to determine Antarctic contributions to the sea level. This is because ice shelves abut the ice sheet. The loss of an ice shelf results in the loss of buttressing, and it could accelerate flow of outlet glaciers and trigger a rapid freshwater pulse to the ocean. In particular, small areas of an ice shelf that is locally grounded on elevated seamounts (called “ice rises”) provide most of net buttressing so their settings, evolution, and detail mechanisms to be formed and lost must be better known to predict the future of the Antarctic Ice Sheet.

Both Norway and Japan maintain wintering stations in Dronning Maud Land, an East Antarctic sector facing the Atlantic and Indian Ocean. West Antarctica facing the Pacific and the Antarctic Peninsula facing American continents are changing rapidly, whereas Dronning Maud Land is changing much more slowly than the others. However, Dronning Maud Land has complicated topography and as a consequence, responses of this region to ongoing climate change are difficult to predict. One of the main research questions in this region is where, when, and how early changes associated with ongoing warming will appear. A few ice shelves have been investigated so far in Dronning Maud Land, but the majority of the coast remains unsurveyed. Pan Dronning Maud Land research is crucial to address this challenge, and it is possible with international collaboration amongst 10 nations that maintain research stations along the Dronning Maud Land coast.

Norway and Japan have carried out numerous collaborative research projects, which were facilitated by a bilateral agreement on cooperation in science and technology, and for Antarctic and Arctic research in particular by a memorandum of understanding exchanged between polar institutes. Recently, Japanese researchers stayed at the Norwegian Troll Station in the 2015/16 Austral summer to investigate retreat of the ice sheet since its last glacial maximum about twenty thousand years ago. During the coming 2018-19 Austral summer, two Norwegian researchers will join the Japanese ground traverse from Syowa Station to the inland Dome Fuji Station for two months. This is an international effort together with the USA to investigate ice stratigraphy and bed topography in detail to characterize possible ice coring sites. Ice cores are the unique paleoclimate archive of atmospheric compositions, and the currently longest record available is only back to about seven hundred thousand years. We are working to find regions where ice older than one million years is present. This collaborative research was developed while I had a fortune to stay at the National Institute of Polar Research in Tokyo as a JSPS fellow hosted by Prof. Kenji Kawamura.

The Norway-Japan Academic Network is a valuable opportunity for me to know researchers beyond my own expertise and share experiences. I would like to acknowledge the JSPS Stockholm Office and the Research Council of Norway for this opportunity. I wish that similar meetings will be held in the coming years to strengthen bilateral relationship between Norway and Japan and eventually promote research and higher education. Arigatou gozaimasu.



Dr. Matsuoka during his presentation

Norway-Japan Arctic Research and Education Cooperation: Research and Teaching under Globalization and the Rise of Asia

Rasmus Gjedssø Bertelsen, Professor, UiT The Arctic University of Norway

Oda Andersen Nyborg, Master in Political Science, UiT The Arctic University of Norway

On the 31st of January 2018, the Research Council of Norway and Japan Society for the Promotion of Science Stockholm Office gathered Norway-based researchers with research experience from Japan. Rasmus Gjedssø Bertelsen presented his association with Japan and Asia. He presented his research as a JSPS invited fellow and guest professor at the Polar Cooperation Research Center, Graduate School of International Cooperation Studies, Kobe University from the 20th of October to 18th of December of 2017. Bertelsen's host was Professor Akiho Shibata. Bertelsen emphasized the importance of graduate student exchange between Norway and Japan for building the next generation of talent and introduced Oda Andersen Nyborg. She presented her experiences presenting her Master's research in Tokyo and applying for MEXT PhD scholarship, mentored and encouraged by Bertelsen.

Bertelsen presented his 2017 JSPS research on the role of transnational knowledge networks in global Arctic shipping governance, which covers the role of knowledge networks between the Arctic states and large Asian shipping nations between academia, business, civil society and government for managing the future shipping in the Arctic. This research was presented at the Third Polar Symposium of Kobe University in December 2017. This Kobe research was inspired by the emphasis on global Arctic shipping governance in a lecture by Koji Sekimizu, former Secretary General of the International Maritime Organization, in August 2016 at the Singapore Maritime and Port Authority. Bertelsen attended as a guest researcher at the National University of Singapore and had the opportunity to discuss the question with Sekimizu, which continued at the symposium in Kobe. The Kobe fellowship was part of Bertelsen's overall Arctic International Relations research, which focus on the place of the Arctic in global environmental, political, economic and security systems. Sometimes one hears views that the Arctic has recently gained international attention because of climate change and was previously isolated from and forgotten by world affairs. It is true that climate change is a new factor, but the Arctic has been an integrated part of and shaped by international political, economic and security events for centuries. Most recently, the Arctic was deeply influenced by World War II and the Cold War.

Today, the great global changes are globalization and the rise of Asia or rather the return of Asia to its historical relative position in the world economy. This global change affects all regions of the world, including the Arctic, which is the topic of much of my research and teaching. A key question connecting the Arctic and rising Asia is shipping, where Japan and Norway are among the world's most important shipping nations.

The Arctic is deeply influenced by the great global political and economic shifts. A couple of centuries ago, Asia was more than half the world economy, but was relatively suppressed

by the industrial revolution, Western imperialism, world wars and domestic revolutions. With the spectacular post-WWII recovery of Japan leading East Asia and the unprecedented economic rise of China since reopening to the world in 1978, Asia is returning to its historical position in the world economy.

Therefore, Bertelsen collaborates with Japanese, Chinese, South Korean and Singaporean colleagues on this research, and he involves students to prepare them for a future globalized and much more Asia-dominated Arctic. Bertelsen puts great emphasis on encouraging and mentoring young Norwegian and international colleagues to benefit from JSPS and MEXT opportunities. One example is Oda Andersen Nyborg's participation in the 2016 Japan-Norway Arctic Science and Innovation Week (ASIW), which inspired her to apply for MEXT funding for a PhD at Kobe University.

Nyborg presented her story of how she had had the opportunity to present her Master's research from the UiT at the 2016 Japan-Norway Arctic Science and Innovation Week, which inspired her to apply for MEXT scholarship to do a PhD in Japan. Norwegian and Japanese students presented posters side by side on the Arctic (and some Antarctic). Two things stood out to Nyborg. First, there was a predominance of natural sciences. Only Norwegian students presented social science work. Second, there were new and unknown people unlike the many familiar faces at European and American Arctic conferences.

Nyborg imagines the opportunity for countries like Japan to drive the dialogue and agenda in Arctic research to advance with time, and she finds it important to be there when it happens. Her trip to ASIW pushed her to view her work in a different light. This trip elevated her research (and her grade). Inspired by this Tokyo visit, Nyborg applied for the 2017 annual MEXT scholarship for Norwegians to do her PhD on Arctic maritime governance at Kobe University supervised by Professor Shibata in collaboration with Bertelsen at UiT. Nyborg was close, but unsuccessful this time around, so she is preparing to reapply in 2018.



Prof. Bertelsen and Ms. Nyborg presenting

The 2nd JSPS Alumni Club in Sweden Activity Seminar of FY2017

Atsushi Nishikawa, Professor, Faculty of Textile Science and Technology, Shinshu University

The JSPS Alumni Club in Sweden (SAC) held a seminar under the theme of "Smart Textiles: Technology for Medicine and Healthcare" on October 19, 2017, at the Swedish School of Textiles, University of Borås. As one of the invited speakers, I took part in the seminar for the first time in a two-night-four-day hectic schedule. Exactly a year before on October 20, 2016, the second SAC Activity Seminar of FY2016 took place with the title "Paper Yarn in Textile and Fashion: A Compostable Raw Material for the Future?" at the Swedish School of Textiles. This means two alumni seminars were held in the same season for two years in a row in the same location of Borås, Sweden, with "textile" as the keyword. (For details of the 2016 seminar, be sure to read the report by Dr. Joel Peterson of the Swedish School of Textiles, University of Borås, posted in [JSPS Stockholm Newsletter English Edition Vol.27 P.13](#), published in February 2017.)

The University of Borås is the only Swedish institution that has a textile department. Mind you, I serve the Faculty of Textile Science and Technology, Shinshu University, the only one of its kind in Japan. Both universities have the only textile department in their respective countries. Therefore, people in general may think that textile science rests in a very specific academic realm. However, this is far from true. By definition, "textile" is the generic term referring to "long and thin substances that are bound together". It is no exaggeration to say that everything in the world is made up against the background of the "textile" technology. In fact, "long and thin materials that are bound together", known as the term of "fiber", are used in wide-ranging industrial areas, encompassing communication; construction and civil engineering; automobiles; aviation and space; medicine, health, and welfare; and electricity and electronics. The recent seminar highlighted the area of medicine and healthcare, in particular, among those many areas using fibers. My specialty is medical robotics, especially the surgical robot. So, Prof. Hideaki Morikawa of the Shinshu University, who was the invited speaker of the last year's Borås seminar, asked me to deliver a lecture about the current status of medical robotics and its interface with the textile. He referred and recommended me to Dr. Joel Peterson of the University of Borås, who was organizing the recent seminar. This way, I could take part in this seminar.

Nowadays, the U.S.-made surgical assistance robot named "da Vinci", has made its way into major hospitals in big cities with its number almost reaching 4,000. America has over 2,500 units, followed by Japan with over 250 units and Sweden with 20 or more. In view of the initial and running costs, the robot is hard to come by in medically depopulated areas and at middle to small-size hospitals. In the main part of the lecture, I explained how high the demand was for the development of a new actuator and a related control technology, citing many actual examples. "Smart Textiles", the main theme of the recent seminar, is illustrated in the book I co-authored, "Smart Textiles and

Their Applications, 1st Edition, published by Elsevier in 2016. The explanation is: "Smart textiles can be defined as textiles that are able to sense and respond to changes in their environment." With my particular focus on "smart textiles as an actuator", I elaborated on a real prototype of super-coiled polymer (SCP) actuators, which had been drawing attention among roboticists for the past few years, at the end of my seminar. The prototype was produced in my laboratory for me to demonstrate to the participants during the seminar. There, I emphasized the importance of the fusion between the medical robot and the smart textile. The SCP actuator has a very simplistic structure, made from nylon and other polymer fibers in a coil subjected to heat treatment, but it can expand and shrink by heating and cooling. It excels biological muscles with its higher shrinkage factor, higher power to weight ratio, and higher responsiveness. What's more, it is an ultra-low-cost actuator that can be produced for less than 5 dollars per kilogram. With the real object on hand, many questions were raised and answered, stimulating an interest among many researchers and students. I am pleased to have had such a meaningful time. The seminar kicked off with the greetings from Dr. Peterson, and my lecture was followed by other interesting lectures by six researchers and corporate engineers, including two from the University of Borås and one from Shinshu University. Those lectures were about the artificial arm of the smart textile, electrical stimulation therapy, a wearable sensor, and applications to electrodes. The end of the event was marked by a tour to facilities in the Swedish School of Textiles, University of Borås. Thus, the event was fully packed with interesting contents.

In parallel to this seminar, my student was accepted to Dr. Peterson's laboratory in the form of academic internship for about three months between mid-September and mid-December. This was a good start of our exchange with the researchers at the University of Borås. My gratitude goes to Prof. Morikawa and all staff of the JSPS Stockholm Office for their effort to organize such an opportunity.



Prof. Nishikawa during his lecture

Alumni Club General Assembly and the 6th Sweden-Japan Academic Network

Imre Pázsit, Professor, Chalmers University of Technology

On 14 February, the General Assembly of the JSPS Alumni Club in Sweden (SAC), and the 6th Sweden-Japan Academic Network took place at the Beijer Hall of the Royal Swedish Academy of Sciences (KVA), Stockholm. The event this year was the sixth, and it was special because it was classified as part of the events held to mark the 150th anniversary of the establishment of diplomatic relations between Sweden and Japan.

The event started with the General Assembly of SAC in the foyer of the Beijer Hall. It was attended by the board of SAC, some alumni members and the staff of the JSPS Stockholm Office. SAC Chair Prof. Göran Thor, Swedish University of Agricultural Sciences, gave an account of the Alumni Club's activity for the past year, 2017, as well as an action plan for 2018, which was discussed by the members. The board also discussed the possibility of organising other events for the current year that may be designated as part of the 150-year anniversary. Finally, Prof. Thor gave some closing remarks, as well as lent over a surprise present to one of the board members, Prof. Imre Pázsit, Chalmers University of Technology, Göteborg, who had a "round number" birthday on that day. The present was a cultivation kit for growing shiitake mushroom at home, and was very much appreciated by the recipient.

The General Assembly meeting finished just on time to give way to the 6th Sweden-Japan Academic Network, organized by KVA, the Embassy of Japan in Sweden and the JSPS Stockholm Office. According to the traditions, it started with an instructive video about the JSPS funding programs and research exchange programs. Prof. Martin Jakobsson, Vice President of KVA, opened the lecture session and gave some introductory remarks. Prof. Emeritus Tadaharu Tsumoto, Director of the JSPS Stockholm Office, gave an introduction of their activities, the type of research and exchange visits supported, and the type of arrangements organised.

Then two keynote lectures were held. First, Prof. Imre Pázsit, had a talk on the subject "Being both Similar and Different: the Case of Nuclear in Sweden and Japan." He noted the many societal, technological and scientific similarities between Sweden and Japan, which are often achieved by diagonally opposite methods. One example was nuclear energy, where both countries went through a similar journey "From euphoria to phobia," although for very different reasons. He also gave an overview of the status of nuclear energy in the two countries, and also talked about non-energy applications of nuclear science, in particular in medicine and plant physiology.

The second lecture was given by Docent Atsuto Maki, KTH Royal Institute of Technology, with the title "Towards Replicating Our Visual Function: Approaches with Machine Learning." Machine learning is the science of using intelligent algorithms, such as artificial neural networks, and data architectures to solve problems that are traditionally difficult to formulate in mathematical algorithms, by exploiting underlying patterns in data. Docent Maki talked about how machine learning can be used for automated image recognition, in particular using deep learning. This field is rapidly expanding, indicating far-reaching consequences in society. The lecture induced a lively Q&A session about many aspects of machine learning.

After the lecture session, H.E. Ambassador of Japan to Sweden, Jun Yamazaki welcomed the participants for the traditional reception. He also talked about the 150-year anniversary of the diplomatic relations. After his toast, the participants engaged themselves in networking discussions, while enjoying tasty Japanese food. Thereby, the 6th Sweden-Japan Academic Network carried on the series successfully, and we look forward to the 7th networking meeting in 2019.



Participants of the General Assembly



Prof. Pázsit presenting

Epilogue to the 6th Sweden-Japan Academic Network

Atsuto Maki, Docent, KTH Royal Institute of Technology in Sweden

The 6th Sweden-Japan Academic Network was hosted on February 14, 2018, at the Royal Swedish Academy of Sciences (KVA) in the Beijer Hall. It was a great privilege to be invited to the event for giving a popular science talk, "Towards Replicating Our Visual Function: Approaches with Machine Learning." As for my current affiliation, I assumed the faculty position at the School of Computer Science and Communication in 2013, but I was also a PhD student there formerly. I returned to KTH after continuing my research in the field of Computer Vision in a few different environments: a corporate R&D center, a national university (both in Japan), and then an industrial lab in the U.K. Having received a kind request to introduce the field in a way easy to follow with the inclusion of my own research topics, I picked the above-mentioned title for the talk.

Computer Vision as a research field is closely related to image recognition, and it is probably fair to say that the field has expanded since the 1970s with an ultimate goal of realizing an artificial vision system whose functions would be comparable to those of human vision. In the early days, often valued was the plausibility from the viewpoint of biological models which have been acquired through the evolution. Having experienced transitions of research themes such as Active Vision and 3D geometry which were mainly led by European and North American institutes, the field has recently seen increasing interests in the subject of automatic recognition along with the progress of Machine Learning technologies. In particular, the research has accelerated thanks to the 2012 breakthrough of Deep Learning, and since then, Deep Convolutional Neural Networks (DCNNs) have been playing one of the central roles in the field, contributing to the recent 3rd hype of Artificial Intelligence.

Although Deep Learning is literally an extension of Artificial Neural Networks (ANNs) derived by multiple and deep layers, there are several profound aspects as a model of Machine Learning. One of them is that visual features obtained in the early layers of the network appear similar to the directional cells which are in the visual cortex of our brains as discovered by Hubel & Wiesel (Nobel Prize in Physiology or Medicine 1981). This phenomenon seems to be also consistent with the direction implied in the 1980s by Fukushima who introduced the Neocognitron as a technology from Japan, making the initial prototype of DCNNs. Another importance of Deep Learning resides in the fact that it provides a generic and powerful methodology for so-called Representation Learning. Worth noting is that the pre-trained generic model is thereby applicable widely to different recognition tasks via Transfer Learning, even where the amount of available data is limited. The range of applications extends to various adjacent fields, e.g. medical image recognition.

In the seminar, I primarily talked about the topic of Transfer Learning that I have recently been focusing on, and touched upon its relationship to the development of Deep Learning. As the title goes, I also showed a few video clips to briefly introduce the KTH Head-Eye System (even presented to H.M. King Carl XVI Gustaf, back in 1992), the Kinetic depth effect,

and robot skill acquisition based on Reinforcement Learning. With those as background, I tried to share an overview of the research field, and I hope the goal has been met even a little as intended.

The time for discussions turned out to be very meaningful with many comments from the audience, including the feedback from Professor Jakobsson, Vice President of KVA, regarding the applicability of Deep Learning to marine technology. Following the lectures, we all enjoyed mingling in a nice and relaxing atmosphere. As an aside, it just so happened two days before the event that I visited the Royal Society in London for a meeting. In contrast to its location nearby Buckingham Palace in the city center, Stockholm's KVA blends in the surroundings with quiet nature beside the water. This gave me an impression of representing the Swedish style, and I appreciated the evening to spend in that venue, feeling as if I had returned to my spiritual hometown.

The Academic Network was held as one of the events for the 150th anniversary of the establishment of diplomatic relations between Sweden and Japan, and a slot was assigned to me, preceded by the very interesting lecture of Prof. Pázsit from Chalmers University of Technology. I wish to express my sincere gratitude to the staff of the JSPS Stockholm Office and all parties concerned for the kind invitation – it was a great and unexpected honor to have an opportunity to give a talk at KVA under such a circumstance.

April 2018, Södermalm, Stockholm, Sweden (while awaiting the cherry blossoms to bloom)



Docent Maki presenting

Japanese Lesson Study in Denmark and Sweden, and Collaboration of Education with Other Industries

Masami Isoda, Prof/PhD, Director of the Center for Research
on International Cooperation in Educational Development, University of Tsukuba

On February 23, I gave a lecture on Japanese Lesson Study in Denmark, Sweden and the world and participated in a panel discussion in order to collaborate with industries at the Japan Alumni Researcher Assembly (JARA). I was invited by Prof. Carl Winsløw, University of Copenhagen and Chair of JSPS Alumni Club in Denmark. In my lecture, I talked about Japanese Lesson Study in Denmark and Sweden by a French Didactician as well as in other regions, and discussed its future developments.

Japanese Lesson Study is now just called ‘lesson study’ in the world; however, to distinguish it from French Didactics, here, I added ‘Japanese’ even though this is not done in Danish and Swedish. French Didactics for mathematics education established the terminology to describe the educational phenomena analytically. It does not include terminology to explain values, objectives and emotional aspects in education, and it is very different from the terminology of Japanese Lesson Study used by teachers and researchers in Japan. Japanese Lesson Study is conducted by teachers with the support of researchers in order to realize better practices for students on the specified teaching subject and objectives. The terminology for Japanese Lesson Study established by Japanese educators, which include teachers and researchers, describes the teaching and learning activities in class on subject matter such as objectives of teaching (why) and explanations in the curriculum (what), the specified methods of teaching (how) and assessments in the class under why and what (how). The objectives usually include the development of process skills and attitudes such as the development of ways of mathematical thinking to be able to learn by and for themselves without teachers. Those objectives themselves are not what is explained by the terminology in French Didactics; however, those are the crucial issues for teachers when educating students. When researchers participate in the Japanese Lesson Study as members of the lesson study group, they must use the teachers’ terminology to produce better practices in student education. Researchers under Prof. Winsløw have collaborated well with our laboratory school teachers on Japanese Lesson Study, then produced research articles on mathematics education using the terminology of French Didactics.

Regarding the panel discussion, I took part as a panelist and spoke on the topic “Higher Education and Industry: Strengths and Weaknesses of Current Interactions of Danish/Japanese Perspectives on What is Needed in the Future.” The panel was comprised of the above-mentioned Prof. Winsløw, as well as Dr. Anemone Platz from the Aarhus University, Dr. Koji Kimita from the Technical University of Denmark (DTU)/Tokyo Metropolitan University, and Director Stefan Sakurai from the LEO Pharma under Prof. Maher Abou Hachem’s excellent moderation of the discussion, which was not only thought-provoking but also inspiring. It was also a great opportunity for me to learn how other science fields collaborate with industry.

In the field of education, issues for the industry include

textbooks and materials, which are the industrialized-products from teaching experiments such as Japanese Lesson Study, and authorization of each country’s government. Japanese mathematics textbooks for elementary and junior high school have been adapted in various countries in the world. In my personal case, I have been involved with the world edition of Gakkotosho’s mathematics textbooks, which elementary editions of which were produced by our elementary school teachers. Currently, all teacher education colleges in Mexico and 600 school projects in Thailand have been using my textbooks. Additionally, the Indonesian edition for all elementary and junior high school students is being developed by the Ministry of Education, Indonesia, and the Papua New Guinea edition is also being developed by the Department of Education, Papua New Guinea under my supervisions. I heard that a Denmark group is developing the Denmark edition of other Japanese publishers’ textbooks. The translations are usually done in collaboration with Japanese researchers.

In these days, STEM (Science, Technology, Engineering and Mathematics) education is one of the hot topics in the field of education. LEGO with visible programming is one of the world famous STEM education materials. Just recently, Nintendo provided Nintendo Labo for visible programming with paper craft work, and SONY provided KOOV for visible programming using blocks based on their computer-game systems. Both of these companies are connected with virtual reality. Educational tools may progress with collaboration of industry sectors and higher education sectors through industrialization. As well as the mutual collaborations on Japanese Lesson Study, the key is human capital and their connectivity to innovate STEM education.

Collaboration on Japanese Lesson Study and French Didactics are ongoing by the next generation who grew up and worked for universities in Denmark, Sweden and Japan. Developing human capital for industry has become a major issue in school education in the context of STEM education.

This one-day seminar gave me a new insight into how education can collaborate with industry effectively. I would say that this seminar was successful in that the academic collaboration between Japan and Denmark was greatly accelerated. I am determined to further contribute to introducing the positive aspects of the Japanese education system to the world.



Prof. Isoda during his lecture

JSPS BRIDGE Fellowship Research Report (ACD)

Tania Ørum, Professor Emerita, University of Copenhagen

My research visit was a great success. My host Professor Yohko Watanabe and her staff at the Keio University Art Center were very hospitable and gave me access to the archive, where I found relevant material for my research into the participation of Yutaka Matsuzawa and the composer Kosugi's orchestra *The Taj-Mahal Travellers* at the 1971 exhibition "Utopias and Visions 1871-1981" at the Moderna Museet in Stockholm, Sweden. I was guided and assisted by the archivists and curators, it was very interesting and useful to talk to the researchers. I gave a guest lecture there on 4 October, 2017, along with the Independent Scholar/Artist Yoshiko Shimada on the subject of Matsuzawa and his participation in the Swedish exhibition.

Apart from my work at the Keio University Art Center, I was also invited by the Director General of the Matsuzawa Yutaka Psi Room Foundation, Haruo Matsuzawa, to visit the foundation and conduct research in the archival materials at Matsuzawa's house in Suwa City, Nagano Prefecture, where I found a great deal of interesting material that will be used in my on-going research, and the publications and conferences planned in continuation of the research visit. I contributed a paper to the international symposium organized in Suwa, on 15 October, 2017, by Ms. Shimada with the following participants: Professor William Marotti (UCLA), Professor Emerita Tania Ørum (University of Copenhagen), Artist and Curator Paul Goede (the Netherlands), Artist Toshiyuki Sunohara, and Independent Scholar and Artist Ms. Shimada. Ms. Shimada had also organized a very enlightening tour of the prehistoric Jomon cultural sites in the Suwa neighbourhood that were an inspiration to Matsuzawa by a local expert.

Ms. Shimada also introduced me to Mr. Kikkawa, Director of the Tobunken National Research Institute for Cultural Properties in Tokyo, where I was kindly shown around the enormous archive and invited to cooperate. I hope this will be possible in the near future.

I hope to continue my dialogue with the researchers at the Keio University Art Center, as I have continued my scholarly contacts with Professor Hiroko Ikegami of Kobe University as well as the independent scholar and artist Ms. Shimada since my visit in 2015.

Host Institution in Japan: Keio University Art Center
Host researcher: Prof. Yohko Watanabe
Fellowship period: 2017.09.25-2017.10.21

A publication in Tokyo of the symposium proceedings from Suwa edited by Ms. Shimada is planned by the start of 2018. A follow-up symposium organized by Professor Marotti is planned at the UCLA in Los Angeles, USA, on 20 February, 2018. A joint publication (by Shimada, Marotti, Ørum and others), expanding on the research on the artist Yoshio Nakajima started at my previous research visit in 2015, is now under preparation. Another joint publication on Matsuzawa is planned. These two publications are planned as international volumes published by international (probably American) publishers.

Apart from my research, I had the opportunity to visit the beautiful Izu peninsula, the temple area of Koyasan, the art island Naoshima, and the other beautiful islands of the Inner Sea.

It was also a great experience to visit the Japanese Alps where Matsuzawa's house is located.

I am very grateful for this opportunity to continue my professional collaboration with Japanese scholars and to learn more about Japanese art and culture. The Bridge Fellowship programme has functioned as a bridge, maintaining previous contacts between Denmark and Japan and creating new scholarly contacts and friendships. The programme has worked well in every way. By enabling me to look into Japanese archives and visiting the home of Yutaka Matsuzawa, this fellowship helped me gain a much deeper insight into the context, working and living conditions of this conceptual artist, his work and his circle of artist friends. Since Matsuzawa's daughters kindly opened his and their home to me and showed me private photo albums and other materials that I could not have accessed from Denmark, I returned home with a new depth of knowledge of Matsuzawa and the Japanese art world of the 1970s.



The Kusama Bus at Naoshima



With Prof. Marotti near Matsuzawa's house, on the tour of prehistoric sites

2018.04.03 Lunch Meeting with IVA and SJF

Director Tsumoto, Deputy Director Yoshihara and International Program Associate Igei had a lunch meeting with Dr. Magnus Breidne, Vice President of the Royal Swedish Academy of Engineering Sciences (IVA), and Ms. Marie Tsujita Stephenson, Information Secretary at SJF. Topics of discussion included speakers and practical arrangements for the upcoming IVA-JSPS Seminar to be held in September.

2018.04.09 Courtesy Visit to the Embassy of Japan in Sweden

Deputy Director Yoshihara, International Program Associates Ishida and Igei paid a courtesy visit to the Embassy of Japan in Sweden and met with Mr. Akira Suzuki, the First Secretary. We discussed upcoming joint events and the commemoration of the 150-year anniversary of diplomatic relations between Sweden and Japan.



Mr. Ishida, First Secretary Suzuki and Ms. Igei

2018.04.10 Visitors from the MIRAI project

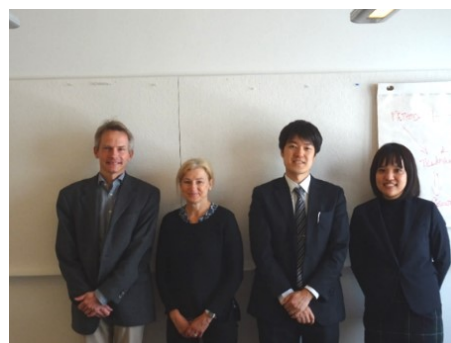
We had visitors involved in the MIRAI project: Dr. Sonia Coelho Sutton, Senior International Coordinator of Lund University, Dr. Malin Graffner Nordberg, Associate Director of Uppsala University Innovation, Prof. Leif Kirsebom, Uppsala University, and First Secretary Suzuki. We exchanged views on the MIRAI seminar to be held in October in Tokyo, and how to maintain the results and success of the project.



Deputy Director Yoshihara, Dr. Coelho Sutton, Dr. Graffner, Director Tsumoto, Prof. Kirsebom and First Secretary Suzuki

2018.04.11 Visit to STINT

Deputy Director Yoshihara, International Program Associates Ishida and Igei paid a courtesy visit to STINT. They met with Dr. Hans Pohl, Programme Director, and Ms. Agneta Granlund, Assistant Programme Manager, and they explained STINT's outline, activities and many programmes. They also discussed the Summer Program Pre-Orientation, held on April 27, and exchanged views on the Fellowship programs and the academic exchange between Sweden and Japan.



Dr. Pohl, Ms. Granlund, Mr. Ishida and Ms. Igei

2018.04.16 Visit to Stockholm University

Deputy Director Yoshihara, International Program Associates Ishida and Igei paid a courtesy visit to Stockholm University (SU) and met with Ms. Elisabet Idermark, Senior Advisor International Relations. They talked about international collaboration between Sweden and Japan, the partnership among SU, KTH Royal Institute of Technology and Karolinska Institutet (KI), and the University of Tokyo. They also exchanged ideas on how to strengthen further partnership between both countries.



Mr. Ishida, Ms. Idermark and Ms. Igei

2018.04.18 Visit to IVA and SJF

Director Tsumoto, Deputy Director Yoshihara and the International Program Associates Ishida and Igei paid a courtesy visit to IVA and met with Dr. Magnus Breidne, Vice President of IVA and Mr. Edvard Fleetwood, Secretary General of SJF. Introductions of each organization were conducted, and views on the practical arrangements of the upcoming IVA-JSPS seminar were exchanged.



Ms. Igei, Mr. Ishida, Mr. Fleetwood, Director Tsumoto and Dr. Breidne

2018.04.23 Visit to Karolinska Institutet (KI)

Director Tsumoto, Deputy Director Yoshihara, International program Associates Ishida and Igei paid a courtesy visit to KI and met with Ms. Lotta Lundqvist, International Coordinator. They discussed the international collaboration between Sweden and Japan, and shared information of events conducted between KI and some universities in Japan.



Ms. Igei, Mr. Ishida, Ms. Lundqvist, Director Tsumoto and Deputy Director Yoshihara

2018.05.04 Visit by Prof. Masato Yasui, Keio University

Prof. Masato Yasui, Vice Dean for Research and International Collaboration and Professor of Keio University School of Medicine, was visiting KI and also took the time to visit the JSPS Stockholm Office. Together with Director Tsumoto and Deputy Director Yoshihara, information on upcoming events such as the Summer School 2018 in Peking University and the MIRAI seminar 2018 was shared.

2018.05.07 Visit to KTH Royal Institute of Technology

Deputy Director Yoshihara, International Program Associates Ishida and Igei paid a courtesy visit to KTH and met with Mr. Torkel Werge, Advisor Bilateral Relations, and Dr. Yoko Takau-Drobin, lecturer. They presented the outline of the university and shared their strategy for internationalization. Opinions on further collaboration between Sweden and Japan within academia were exchanged.



Mr. Werge, Dr. Takau-Drobin, Ms. Igei and Mr. Ishida

A Historical Look at the 150-Year Anniversary

Viktor Granström, Assistant, JSPS Stockholm Office

This year, Sweden and Japan are celebrating 150 years of diplomatic relations. Organizations and individuals alike are celebrating them by organizing events in their respective countries.

What marks the official start for this 150 year anniversary, is an event that took place in 1868 where Sweden and Japan concluded a Treaty of Friendship, Navigation and Commerce which was the first formal treaty with a foreign power signed by the period's Meiji Government. It was signed in Yokohama through Dutch legation. However, while this marks the anniversary's official start, it was not the first recorded interaction between the two nations. This honor goes to Swedish Admiral Johan Olofsson Bergenstierna who was the first recorded Swedish to have set foot in Japan on his visit in 1647 during a stopover. The first longer stay was conducted by seaman Olof Eriksson Willman who chose to stay for a year in Japan. Willman later published a book titled *A short account of a journey to East India and Japan*. This edition was translated into Japanese in 1953 with the Japanese title *Nihon Ryokoki*.

In 1775, Carl Peter Thunberg, the disciple of the renowned botanist Carl von Linné (or Carl Linneaus) arrived in Japan and worked on his creation *Flora Japonica and Fauna Japonica* in which he documented 812 plant and 334 animal species. He was one of the few foreign visitors to Japan during its era of national isolation (1600-1868), and his accounts remain an important source of information about this to this day.

Looking historically at the fields of science and academia, Hideki Yukawa was the first Japanese to be awarded a Nobel Prize. He was awarded for his prediction of the existence of mesons on the basis of theoretical work on nuclear forces, in 1949.



Hideki Yukawa, 1949

Source: <https://swedenjapan150.jp/en/history/>

The first Swedish language course to be offered in Japan was done by Tokai University in 1967 where other universities such as Osaka University's School of Foreign Studies (currently known as Osaka University) and Kansai Gaidai University followed suit in the following years. Stockholm University in Sweden started teaching Japanese language courses back in 1963 where researchers were accepted from 1972 and professorship within the subject, Japanology, was

introduced in 1975.

In 1992, the Stockholm School of Economics founded the European Institute of Japanese Studies (EJIS) which carries

out Japan-related academic and research activities across Europe. In 2001, the Japan Society for the Promotion of Science (JSPS), Japan's core research funding agency, opened its first and only branch in Scandinavia here in Stockholm. Our aim is to develop successful relationships between academic researchers in Japan and the Nordic-Baltic countries.

In 2015, the Nobel Prize Dialogue was held for the first time outside of Sweden in Tokyo. The focus was on the future of genetic science whereas world-leading scientists, policy makers and seven Nobel Laureates gathered to discuss. The second Nobel price Dialogue Tokyo was held in 2017, this time focusing on the future of intelligence. The most recent one, the third Nobel Price Dialogue Tokyo was held in March of 2018, with focus on the future of food.

Organizations are during this year of 2018 looking to celebrate the history of the two nations. Both cultural events and academic related events are held in both nations and the list is continuously growing. The supporting secretariat in Sweden, in collaboration with other organizations has set up its official webpage for the anniversary where various events are listed. You can view it at: <http://swedenjapan2018.se/>. Furthermore, the Embassy of Sweden in Japan also has a similar website for events in Japan which you can view at this link: <https://swedenjapan150.jp/en/>.

In keeping with the spirit of celebration surrounding the anniversary, the JSPS Stockholm office is planning several events for this year. Let's celebrate the anniversary together!

Sources:

Bert Edström (2018), Sverige-Japan 150 år av vänskap och samarbete

<https://swedenjapan150.jp/en/history/>

<https://www.su.se/asia/japanska>



JSPS Stockholm Office

The JSPS Alumni Club in Sweden

From this issue, we have added a new corner with a message from the Alumni Clubs in cooperation with the JSPS Stockholm Office.

First up in this new interview series is **Professor Göran Thor**, Chair of the Alumni Club in Sweden (SAC).

Overview of SAC

- **Establishment:** 2005
- **Number of Members:** 160
- **Chair:** Göran Thor, Professor, Department of Ecology, Swedish University of Agricultural Sciences
- **Main Activities:** SAC Activity Seminars, Sweden-Japan Academic Network, General Assembly, Board Meetings
- **Rules and Regulations:** Stipulated in the Articles of the Club



Prof. Göran Thor

Q: Could you briefly introduce yourself and tell us about your relationship with the JSPS Alumni Club in Sweden (SAC)?

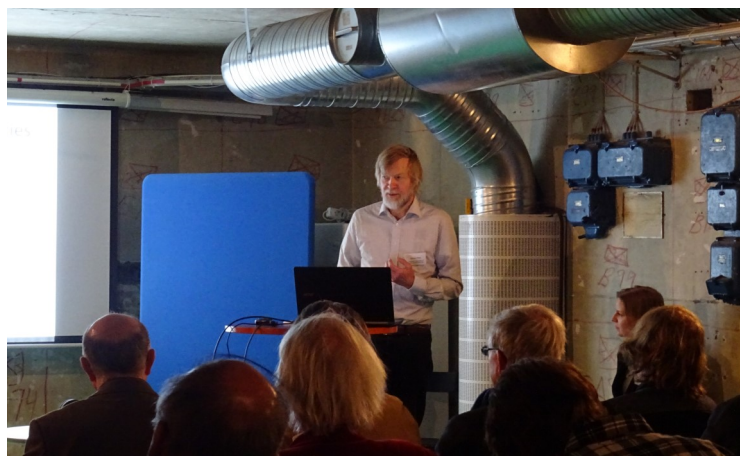
A: I was postdoctoral fellow in Japan from 1994 to 1996 at the National Museum of Nature and Science in Tsukuba, Ibaraki Prefecture where I studied lichens. The botany connection between Japan and Sweden has a very long tradition. The first and certainly most well-known visitor to Japan was Carl Peter Thunberg, a student of the Swedish botanist Carl Linnaeus. My visit was most memorable but I also learned that humans are very small as compared to nature during the Great Hanshin earthquake (Kobe earthquake) in January 1995. After returning to Sweden in March 1996, I have visited Japan several times to conduct research and to make private visits. I was more than happy to be able to get in contact with JSPS when they established an office in Stockholm, and when the SAC was established in 2005, I became a member. Since 2008, I have been a board member and since 2016, I have served as the chair.

Q: Could you briefly give us an overview of your alumni club?

A: The SAC was established in 2005 by the initiative of former JSPS fellows, with the support of the JSPS Stockholm Office. Currently, there are over 160 members. In FY2015, we commemorated the club's 10-year anniversary, and organized a mini-symposium, focusing on the exchange history of Swedish and Japanese researchers and its future. Every year, the SAC organizes symposia on various themes, the Sweden-Japan Academic Network, the annual General Assembly and Board meetings.



Members engaged in a group discussion at the 10-year anniversary symposium



Prof. Thor during the 10-year anniversary symposium

Q: How can people who are interested in your Alumni Club become a member?

A: Everyone is welcome to join our Alumni Club. If you are interested in our club, please visit the JSPS Stockholm Office website (<http://www.jsps-sto.com/sac.aspx>), and check the eligibility requirements. If you are eligible for our club, please register through the application form on the website, and a board member will soon contact you.

Q: What were the Club's main activities of FY2017, and what activities is the Club planning for FY2018?

A: In FY2017, we had two Activity Seminars; one was held at Linköping University in August, with the title of "Andrology: Reproduction and Health During a Man's Life Time". The invited speaker from Japan was Prof. Noriko Osumi, Department of Developmental Neuroscience at Tohoku University Graduate School of Medicine. The other was held at the Swedish School of Textiles at the University of Borås in October, with the title of "Smart Textiles—Technology for Medicine and Healthcare". The specially invited guest from Japan was Prof. Atsushi Nishikawa from Shinshu University. Additionally, together with the Royal Swedish Academy of Sciences (KVA) and the Embassy of Japan in Sweden, we held the Sweden-Japan Academic Network at KVA in February. We also had a General Assembly and Board Meetings during the year to decide the direction of our Alumni Club activities.

In FY2018, we are planning two Activity Seminars, and a Sweden-Japan Academic Network. I hope those who read my interview will visit some of these events! I would like to ask you to check the JSPS Stockholm website and Facebook page for our event information.



Prof. Osumi, invited speaker at the 1st SAC Activity seminar in FY2017



Prof. Nishikawa, invited speaker at the 2nd SAC Activity seminar in FY2017

Q: Do you have any message for our newsletter readers?

A: My belief is that to handle future human challenges such as climate change, technical development and environmental destruction, cooperation is the only way forward. I am most happy that the SAC can support JSPS in making cooperation possible between Japanese and Swedish researchers. If you are interested to perform research in Japan, feel most free to make contact with anyone on the SAC board. Please refer to the contact information on the JSPS Stockholm website (http://www.jsps-sto.com/sac_board.aspx). SAC warmly welcomes everyone who has or will receive support from JSPS or SAC to become a member. We especially encourage younger scientists to become members and become active in our club!

From this issue, we will introduce this new corner “Reports from Japanese Researchers in the Nordic/Baltic Nations.” First, we asked Dr. Kaneyasu Nishimura, a researcher at the Karolinska Institutet since July 2015, to introduce his research and experience in Sweden.



Dr. Kaneyasu Nishimura

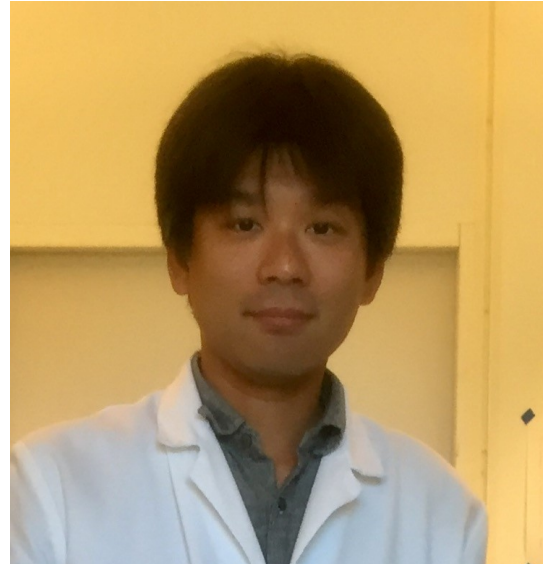
Years	Degree	Institute and Location
2008	Ph.D.	Graduate School of Pharmaceutical Sciences, Kyoto Pharmaceutical University, Kyoto, Japan
2005	M.S.	Graduate School of Pharmaceutical Sciences, Kyoto Pharmaceutical University, Kyoto, Japan
2003	B.S.	Pharmaceutical Sciences, Kyoto Pharmaceutical University, Kyoto, Japan
Position:		
2017 - present		Research Coordinator; Department of Medical Biochemistry and Biophysics, Karolinska Institutet
2016 - 2016		Senior Researcher; Department of Medical Biochemistry and Biophysics, Karolinska Institutet
2015 - 2016		Postdoctoral Researcher; Department of Medical Biochemistry and Biophysics, Karolinska Institutet
2010 - 2015		Postdoctoral Researcher; Department of Clinical Application, Center for iPS Cell Research and Application (CiRA), Kyoto University
2008 - 2010		Postdoctoral Researcher; Department of Biophysics, Graduate School of Science, Kyoto University

Q: What are you currently researching in Sweden?

A: My current research is the establishment of the method for the generation of midbrain dopaminergic neurons from human pluripotent stem cells with high purity and specificity, according to developmental process. In particular, I am attempting the subtype specification of midbrain dopaminergic neurons.

Q: How did you get interested in your research subject?

A: I encountered planarians, very interesting animals that can regenerate their whole brain after being cut with a knife, when I was a PhD student fifteen years ago. It was also very impressive that planarians can regenerate dopaminergic neuronal networks in two weeks. Although human beings are unable to regenerate dopaminergic neurons, I am curious to see if we can generate dopaminergic neurons from human pluripotent stem cells in the dish.



Q: Why did you choose your current institution to conduct your research?

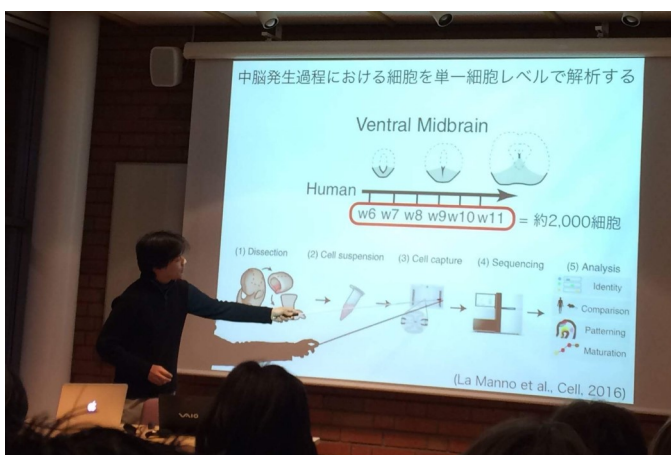
A: My previous laboratory in Japan (Center for iPS Cell Research and Application, Kyoto University) was conducting basic research toward clinical application by using human induced pluripotent stem cells. During that time, I strongly desired to study the fundamental biology of midbrain development because midbrain development gives us great opportunities to consider how to make dopaminergic neurons from pluripotent stem cells. Therefore, I applied for my current laboratory. My current laboratory is investigating midbrain development and identifying the important factors and its mechanism. I thought, "That's the place for me to pursue my work!"

Q: What has been the most challenging in your research so far?

A: The research environment here is quite exciting because there are many researchers who are doing outstanding research and developing novel technologies in Karolinska Institutet. So my challenge is to advance my research by discussing and collaborating with them.

Q: Compared to Japan, what is your impression of the research environment in Sweden?

A: Many researchers are visiting from foreign countries on fixed-term appointments. Therefore, they concentrate on getting results and are determined to win in their research field. They manage their projects smoothly and speedily. And our laboratory is the openlab style in which the experimental space is shared with six laboratories. It is a very nice and exciting environment that facilitates the communication with each other to get new ideas and inspiration.



Q: Do you have any advice for young scientists who dream of going to Sweden to do research?

A: Stockholm is a very international city. Most Swedish people can speak English and transportation is also well developed. Stockholm is a very comfortable city for researchers from abroad. Swedish universities and institutes welcome visiting researchers from abroad, and the visa process is very smooth, especially if you have a PhD. All researchers manage their working style by themselves, not like Japanese research environment. And you can take a long summer vacation (four weeks) !

Lund University Orders Photolithography System for Nanowire Growth

The Swiss startup company Eulitha AG, announced on March 29 that Lund University in Sweden ordered one of its PhableR 100 DUV photolithography systems. The company specializes in developing innovative lithographic equipment and services in nanotechnology, optoelectronics and photonics. The PhableR 100 DUV exposure tool enables low-cost printing of very high-resolution periodic patterns with feature sizes well below 100nm.

The tool will be installed at Lund Nano Lab (LNL), a nanofabrication facility operated by NanoLund, the Center for Nanoscience at Lund University.

Operations Manager Dr. Maria Huffman at LNL stated that it will be a useful and a unique tool in Sweden, making it attractive to nanowire growing researchers, in particular those working on LED and solar cell development. She also expressed hope that the tool will attract diverse researchers both locally and nationally.

Source:

<http://www.eulitha.com/company/news/article/lund-university-orders-phabler-100-duv-photolithography-system/>

New Strategy Aims to Lift Denmark to the Top of European Life Science

The Danish government has announced a new plan for Denmark to become a leading nation in the European life science sector, strong enough to counter the tough international competition.

The government's strategy includes 36 initiatives, spread across the following seven core areas: i) attractive to research and develop in Denmark, ii) more clinical research in Denmark, iii) a world class pharma authority, iv) better access to qualified labour, v) more startups and digital transition, vi) a goal-oriented internationalization effort, and vii) a new life science unit in the Business Ministry.

Life science has become an area of strength for Denmark, and Danish life science companies are currently among the leaders in the global market for pharmaceuticals and medical equipment. Between 2001 and 2015, the full-time employment within this field increased by 45 percent.

The complete list of initiatives (in Danish) can be found here:

https://www.regeringen.dk/media/4950/010318_vaekstplan_life_science.pdf

Source: <http://cphpost.dk/news/business/new-strategy-aims-to-lift-denmark-to-the-top-of-european-life-science.html>



Photo: geralt/Pixabay

Japanese Government to Launch \$940 Million Fund for Space Start-Ups

The private space exploration industry is on the rise with figures such as Elon Musk popularizing the industry in the American news. While the private space industry is nothing new, it was announced last March that the Japanese government is set to launch a \$940 million fund for space start-ups within Japan. One of the Tokyo-based startups ispace is planning to launch two missions to the moon, one in 2019 and the second one by the end of 2020 with the goal to put rover vehicles on the moon.

The government is to offer investments and loans over half a decade starting from this fiscal year 2018. Under this initiative, nascent startups will be eligible for aid of up to 10 million yen to cover costs such as research and patent applications. Furthermore, companies that show promise of bringing products or services to market will be introduced to investors and venture capitalists.

Tokyo-based startup ispace's CEO and founder Mr. Takeshi Hakamada comments: "We're going to bring scientific instruments to the moon, and sell the right to use our data to space agencies and other institutions, as well as provide transportation services, for profit."



Photo: SpaceX-Imagery/Pixabay

Sources:

<https://www.cnbc.com/2018/03/20/japan-offers-940-million-to-boost-nations-space-startups.html>

<https://asia.nikkei.com/Japan-Update/Japan-to-fuel-space-startups-with-nearly-1bn-funding-pool>

Dr. Akira Yoshino Awarded the 2018 Japan Prize

On January 30, the Japan Prize Foundation announced the laureates of the 2018 Japan Prize. Dr. Akira Yoshino, professor at Meijo University and honorary fellow at Asahi Kasei Corp., was awarded in the field of Resources, Energy, Environment and Social Infrastructure, for his invention of lithium-ion batteries (LIB).

Dr. Yoshino has made significant contributions for the development of LIB and his work in this area is considered as the foundation of today's technology and industry. The importance of the LIB to the modern society continues to grow as a tool to stabilize the power from natural energy sources to counter global warming.

Other laureates include Dr. Max D. Cooper, professor at the Emory University School of Medicine, and Dr. Jacques Miller, professor Emeritus at the Walter and Eliza Hall Institute of Medical Research who were awarded in the field of Medical Science and Medicinal Science, for their discovery of B and T lymphocyte lineages and its impact on understanding disease pathology and therapeutic development. The three Laureates were honored at the prize award ceremony held in Tokyo on April 18.

The Japan Prize is an international prize awarded to scientists and engineers who have made significant contributions to the advancement of science and technology, and served to promote peace and prosperity of humankind.

Each year two fields are honored, and the Laureates receive a certificate of merit, a prize medal, and an award of 50 million yen for each prize field.

Sources:

http://www.japanprize.jp/en/press_releases20180130.html

<http://www.asahi-kasei.co.jp/asahi/en/news/2017/e180130.html>



Dr. Yoshino, Asahi Kasei

Source: http://www.asahi-kasei.co.jp/asahi/en/r_and_d/interview/yoshino.html

Times Higher Education Japan University Rankings 2018

For the second year, Times Higher Education (THE) has produced the Japan University Rankings together with the Japanese education company Benesse, published on March 28.

In 2018, the first place is shared between Kyoto University and the University of Tokyo, followed by Tohoku University, Tokyo Institute of Technology and Kyushu University. The rankings were calculated based on resources, engagement, outcomes and environment. What differs this ranking from the THE World University Rankings is that it is more focused on what institutions offer students rather than on research data. Issues such as faculty per student, student ability development, academic reputation, international exchange programs etc., have been closely examined.

For the first time this year, THE conducted a student survey to investigate what students think of the teaching at their university. Though the results of the survey were not included in the rankings, the results will be published separately later in the year.

Please find the full ranking list here: https://www.timeshighereducation.com/rankings/japan-university/2018#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/scores

Source: <https://www.timeshighereducation.com/student/best-universities/best-universities-japan>



Photo: andrew_t8/Pixabay

Notices

Upcoming Seminars and Symposia

IVA-JSPS Seminar

Date: September 20-21

Venue: The Royal Swedish Academy of Engineering Sciences (IVA), etc.

Speaker: Prof. Hiroshi Amano, Nagoya University, Director, Institute of Materials and Systems for Sustainability Center for Integrated Research of Future Electronics, 2014 Nobel Prize Laureate in Physics

The 5th Japan-Lithuania Joint Science Symposium

Date: September 25

Venue: Vilnius, Lithuania

KVA-JSPS Seminar

Date: November 26

Venue: The Royal Swedish Academy of Sciences (KVA)

Speakers: Prof. Takaaki Kajita, Director, Institute for Cosmic Ray Research, the University of Tokyo, 2015 Nobel Prize Laureate in Physics, Dr. Hitoshi Murayama, Director, Kavli Institute for the Physics and Mathematics of the Universe, the University of Tokyo

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

Regarding our policy on processing of personal data under the EU General Data Protection Regulation (GDPR)

The EU General Data Protection Regulation (GDPR), will be enforced on **May 25, 2018**. Based on this regulation, the JSPS Stockholm Office will take necessary actions when handling of personal information. If you have any inquiries regarding our policy for the handling of personal information, please contact us. We appreciate your understanding and cooperation on this matter.



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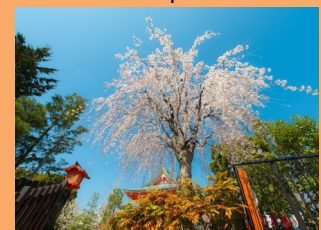
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