



# JSPS Stockholm Newsletter

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## Diversity of the Country Size and Borderless Science

Tadaharu Tsumoto, Director, JSPS Stockholm Office

Needless to say in this essay, the main mission of our office is to enhance or facilitate research collaborations and exchanges of researchers and students between Japan and the Nordic/Baltic countries that are, in order of population: Sweden, Denmark, Finland, Norway, Lithuania, Latvia, Estonia and Iceland. The size of these countries in terms of population is very variable, although as a whole not as large as those of the G7 countries. The total population of Sweden is now just above 10 million while that of Iceland is about 350,000. Furthermore, the number of researchers in these countries seems to be variable, although it is difficult to estimate the exact number of researchers because it depends on the definition of researchers.

Since I came to our office in June 2016, I have had the opportunity to visit most of these countries and to meet with many researchers and students in universities and officers in various funding organizations of these countries. Also I attended events organized by our Alumni Clubs, as reported in past and present newsletters. So far I have learned that while research activities in Sweden cover almost all fields of science and technology, those in the smaller countries are more or less biased towards particular fields. This might be inevitable, considering the number of researchers in given research fields. The fields of science and technology that the JSPS programs cover extend over almost all fields, including biology, medicine, physics, chemistry, mathematics, economy, psychology, literature and so on. Thus, the number of researchers in a particular field is limited to a small number or null in an extreme case in the small countries. On the other hand, networks of researchers naturally extend across countries and are as such, borderless. In my own experience, I had many overseas colleagues or friends who worked in the same field as that of mine and enjoyed a feeling of friendship through such a global network. This is very natural because science per se is an attempt or endeavour for new findings that have the universality all over the world. On the other hand, the

system of funding for research in each country is somehow of domestic nature except for the funding of the European Research Council, Human Frontier Science Program and other international organizations, because a source of governmental funds comes mostly from taxes paid by residents and companies in each country.

Thus the funding system seems to have country borders or area borders for itself. In case of JSPS, its activities are financially supported nearly completely by the Japanese Government so that almost all the funds come from taxes of residents and companies in Japan. Nevertheless, JSPS supports various types of international programs, because it is self-evident that the international collaboration is essential for the advancement of science and technology, as almost all funding organizations in the world are aware of. On the basis of this view, JSPS has several international programs between Japan and many countries, some of which have the much larger populations than the Nordic/Baltic countries have. Therefore, the distribution of funds to the smaller countries becomes relatively small. Nevertheless, in my view, JSPS does not ignore nor make light of small countries, because science and technology and thus the network of researchers are borderless, as mentioned above. Also, I would like to point out that researchers in the smaller countries need international collaborations in a more extensive way, and consequently gain more benefits from the collaborations than those in the larger countries, because possible collaborators in the same fields are mostly located in the countries other than their own.

This essay is based on my personal view, but I hope JSPS will be able to further support international activities of researchers in the small countries as well.



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## IVA-JSPS Seminar with Prof. Hiroshi Amano

On September 20, IVA-JSPS Seminar “The Future is Light” was held at the Royal Swedish Academy of Engineering Sciences (IVA), and at AlbaNova University Center of KTH Royal Institute of Technology on September 21.

From JSPS Stockholm Office, Director Tsumoto, Deputy Director Yoshihara and International Program Associate Igei attended. On the first day, the seminar started with opening remarks from Prof. Tuula Teeri, President of IVA, H.E. Ambassador Jun Yamazaki, the Embassy of Japan in Sweden, and Mr. Noriyoshi Masuko, Senior Managing Director of JSPS and we invited special speakers from both countries: Prof. Hiroshi Amano, Nagoya University, Japan, 2014 Nobel Prize Laureate in Physics, and Prof. Fredrik Laurell, KTH Royal Institute of Technology, Sweden. Prof. Amano gave a talk titled “Blue LEDs and Transformative Electronics for Developing Sustainable Smart Society” and also had a presentation on his background story leading up to him receiving the Nobel Prize and his current research. Prof. Laurell gave a lecture on application of laser technology entitled “The Blue Laser and its Application in Modern Technologies.”

The IVA-JSPS seminar aims to cooperate with relevant organizations with a wide range of memberships in academic and industrial circles nationwide, and in particular, Japanese researchers active in the front lines of interdisciplinary fields such as engineering, applied chemistry, environment and energy. JSPS invites Japanese researchers to Sweden to promote academic exchanges between the two countries and the seminars have been held annually since FY2013.

This seminar has been jointly organized by IVA, Sweden-Japan Foundation, the Embassy of Japan in Sweden and the 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. The first day of the seminar attracted approximately 60 people and the presenters received many questions and comments after the presentations.

The seminar can be viewed online here: <https://www.iva.se/en/tidigare-event/the-future-is-light/>



President Teeri



Ambassador Yamazaki



Senior Managing Director Masuko



Prof. Amano



Prof. Laurell



On September 21, the event continued with a lecture held at AlbaNova University Center of KTH Royal Institute of Technology to approximately 150 participants including university students and young researchers gathered at the venue. The lecture began with opening remarks by Prof. Mikael Östling, KTH Deputy President. Prof. Amano then held a lecture titled “Lighting the Earth with LEDs”. The following Q&A session received many questions from the audience and provided a great opportunity for the visitors to discuss and share knowledge.

After the lecture, a reception over sushi was held with all participants together with Prof. Amano and Prof. Laurell that further allowed the participants to continue their discussion with the lecturers and other visitors. Across the 2 days of the IVA-JSPS Seminar there were in total around 210 participants in attendance and it proved a very successful event and fruitful for the continued collaboration between Japan and Sweden in the research field.



Deputy President Östling



Prof. Amano



Audience asking questions



Audience during presentations



Reception after the presentations



Visitors at the reception

## Lecturer Information



### **Prof. Hiroshi Amano**

#### **Nagoya University, Japan, 2014 Nobel Prize Laureate in Physics**

Hiroshi Amano is a Japanese physicist and inventor specializing in the field of semiconductor technology, especially LEDs (light emitting diode). For his work he was awarded 2014 Nobel Prize in Physics together with Isamu Akasaki and Shuji Nakamura for “the invention of efficient blue light-emitting diodes which has enabled bright and energy-saving white light sources.”



### **Prof. Fredrik Laurell**

#### **KTH Royal Institute of Technology, Sweden**

Fredrik Laurell is a professor of Physics at the KTH Royal Institute of Technology in the fields of laser physics and photonics. Alongside his research and teaching Laurell has been involved in a number of important assignments, including for the Royal Swedish Academy of Sciences (KVA), Swedish Optical Society (SOS) and European Optical Society (EOS).

## Sweden-Japan Conference -Sparking Interest in Science through Space- with Dr. Chiaki Mukai

On October 8, Sweden-Japan Conference “Sparking Interest in Science through Space” was held at the IVA Conference Center, Stockholm. Eight wonderful speakers from both countries included Dr. Chiaki Mukai, Astronaut/Senior Advisor to the Director General of the Japan Aerospace Exploration Agency (JAXA), Dr. Christer Fuglesang, Astronaut/Professor at KTH Royal Institute of Technology, and Prof. Yoshifumi Saito, Institute of Space and Astronautical Science (ISAS) of JAXA. From JSPS Stockholm Office, Director Tsumoto, Deputy Director Yoshihara and International Program Associate Ishida attended. This special event was held by the two organizers: VA (Public and Science) and Umbilical Design with the support of seven additional organizations: The Royal Swedish Academy of Engineering Sciences (IVA), Sweden-Japan Foundation (SJF), Swedish National Space Agency (SNSA), Swedish Space Corporation (SSC), Scandinavia-Japan Sasakawa Foundation, Astronomisk Ungdom (Swedish Astronomical Youth Association) and the JSPS Stockholm Office.

After opening remarks by President Tuula Teeri, IVA, the two astronauts gave their respective lectures. Dr. Mukai talked about “Science and Technology in Human Space Exploration - Space for the Earth Benefit”, regarding various possibilities that the Universe brings to all human beings. This was then followed by Dr. Fuglesang and his talk about “Space Travel and Science in Space”, regarding his own experience as an astronaut. In the subsequent Q&A session, the entire venue listened intensely to the answers by the two astronauts that were thought-provoking and, at times, humorous.

After that, a lecture was given by Prof. Saito, an invited speaker from Japan as well as Dr. Mukai. The title of the talk was “Collaboration between ISAS and IRF – Mars, Moon, Mercury, Jupiter and Beyond”, regarding the present situation of JAXA’s international Mercury exploration plan named “BepiColombo.” He also spoke about collaboration between Japan and Sweden’s space development. Following the presentations were a lively panel discussion with invited panelists from the various organizations as well as the main speakers.

At the end of the event, Director Tsumoto, and Mr. Stefan Gustafsson, Senior Vice President of SSC, provided the closing remarks to a very successful event. Director Tsumoto expressed gratitude to all the organizations who cooperated to hold this conference.

With approximately 140 participants, it was a fitting celebration of Sweden-Japan 150th anniversary. This is a series of Sweden-Japan Space conferences, and the next event will be held in Tokyo on November 20.

The seminar can be viewed online here:

<http://v-a.se/2018/10/sparking-interest-in-science-through-space>



Above: Dr. Fuglesang and Dr. Mukai answering questions

Below: Prof. Saito during his lecture



Front row from the left: Mr. Anders, Presenter, VA; Prof Saito; Ms. Askwall, Presenter, VA; Ms. Rathsmann, SNSA; Dr. Fuglesang; Dr. Mukai and Ms. Hertz, Umbilical Design

Back row from the right: Mr. Gustafsson, Senior Vice President, SSC and Mr. Holmberg, Chair, Astronomisk Ungdom





President Teeri during the opening remarks



Photo of the panel discussion



Mr. Gustafsson during the closing remarks



Audience during the Q&A session



Dr. Fuglesang and Dr. Mukai during the Q&A session

## Lecturer Information



### Dr. Chiaki Mukai

#### Senior Advisor to the Director General, JAXA

From 1977, Dr. Mukai worked as a resident in General Surgery, Keio University Hospital. In 1985, she was selected by the National Space Development Agency of Japan (NASDA, currently JAXA) as one of the three Japanese Payload Specialists (PSs) for the First Material Processing Test (FMPT). From April 2011, she has been serving as Senior Advisor to the JAXA Executive Director and she has taken the current position since 2018.

Source: <http://iss.jaxa.jp/en/astro/biographies/mukai/>



### Dr. Christer Fuglesang

#### Professor, KTH Royal Institute of Technology

In 1989, Dr. Fuglesang joined the European Nuclear Research Organization (CERN) as Senior Fellow; in 1991, he was a lecturer at Stockholm University; in 1998, he was a flight assignment as a Mission Specialist and then assigned to NASA's Astronaut Office; in 2006, he became an Affiliate Professor, KTH. He is a member of the Royal Swedish Academy of Engineering Sciences (IVA) and the Royal Swedish Academy of Sciences (KVA). Spaceflights occurred during 2006 and 2009.

Source: [http://www.esa.int/Our\\_Activities/Human\\_Spaceflight/Astronauts/Christer\\_Fuglesang](http://www.esa.int/Our_Activities/Human_Spaceflight/Astronauts/Christer_Fuglesang)



### Prof. Yoshifumi Saito

#### Professor, ISAS of JAXA

From 1992, Prof. Saito worked as Assistant at ISAS. Afterwards he became an Assistant Professor in 2011. Since 2016, he has taken the present position as a Professor at ISAS. He is also a Professor (commissioned) from the University of Tokyo, Graduate School of Science.

He is responsible for many international projects including the joint mission between ESA and JAXA to the planet Mercury titled "BepiColombo", and Jupiter Icy Moons Explorer "JUICE".

## **The 1st SAC Activity Seminar for FY2018 with Prof. Wakayama**

On August 22 to 23, the 1st JSPS Alumni Club in Sweden (SAC) Activity Seminar for FY2018 was held at Linköping University. The title of the seminar was “Environmental Impact on Reproduction and Fertility.” From our office, Director Tsumoto and Office Assistant Tashima participated. The seminar opened with an introduction from the organizer Dr. Manuel Álvarez-Rodriguez of Linköping University. Director Tsumoto then presented JSPS activities. Specially invited speaker Prof. Teruhiko Wakayama, Advanced Biotechnology Center, University of Yamanashi, held a presentation titled “Freeze-Dried Sperm Preserved on Space Station.”

The 2 day seminar was attended by more than 25 participants, and all were engaging in the discussion and reception.

Please find a report written by Prof. Wakayama on page 15.



Group photo of the participants

## **Pre-Summit ahead of the Sweden Japan University and Research Leadership Summit - a Working Meeting for Funding Organizations**

On August 29, the Pre-Summit was held at World Trade Center Stockholm. The aim of this Pre-Summit was that funding agencies of Japan and Sweden meet and discuss strategic university initiatives, their possible impact and sustainability from a funding organization's perspective, ahead of the Sweden-Japan University and Research Leadership Summit in Kyoto, which was held on October 6, 2018. Attendees included a range of representatives from the relevant ministries and agencies of both countries. From the JSPS Headquarters, Mr. Kazuya Hashimoto, Head of International Research Cooperation Division II, and from the JSPS Stockholm Office, Director Tsumoto, and Deputy Director Yoshihara attended. They discussed such agenda as “How can funding organizations stimulate universities in setting priorities and stimulate collaboration?” and “How can impact from strategic university initiatives be enhanced?”

## **The 7th Japan-Sweden Joint Committee on Science and Technology Cooperation**



Group photo of the participants

Source: <https://www.mofa.go.jp/mofaj/index.html>

On August 30, the 7th Japan-Sweden Joint Committee on Science and Technology Cooperation was held at Ministry of Education and Research (MER), Stockholm. The Joint Committee was co-chaired by H.E. Takeshi Nakane, Ambassador for Science and Technology of the Ministry of Foreign Affairs of Japan (MOFA) and Dr. Jonas Björck, Director, Division for Research Policy, MER. Attendees included a range of representatives from the relevant ministries and agencies of both countries. From the JSPS Headquarters, Mr. Hashimoto, Head of International Research Cooperation Division II, and Ms. Mihoko Yana, Overseas Fellowship Division, and from the JSPS Stockholm Office, Director Tsumoto, and Deputy Director Yoshihara attended. They shared information under the topic of overview of Science and Technology Policy Development, follow-up from the previous Joint Committee of FY2016 and collaboration on large scale research facilities.



### The 3rd JSPS Pan Nordic Alumni Club Chair Meeting via Skype

On September 5, the 3rd Pan Nordic Alumni Club Chair Meeting was held through Skype. Prof. Göran Thor, Chair of SAC; Dr. Ville Syrjälä, Chair of ACF; and Prof. Carl Winsløw, Chair of ACD, participated. From our office, Director Tsumoto, Deputy Director Yoshihara and Office Assistant Tashima attended. The JSPS Pan Nordic Alumni Chair Meeting was initiated in FY2016. It is held annually in order to create a platform for the chairs of the Nordic Alumni Clubs to meet and exchange information. Through this meeting, topics of discussion were: How to increase the number of applications for the Activity Seminars, how to increase the number of participants of the above mentioned seminars, and how the way these seminars are managed. We also exchanged opinions on how to enhance the Alumni Club's activities.



Picture of the meeting

### Student Exchange Program Between the University of Tokyo and Three Universities in Stockholm

On September 7, we were honored to hold a welcome reception at Stockholm University as a part of student exchange program between Karolinska Institutet, KTH Royal Institute of Technology, Stockholm University and the University of Tokyo titled "Stockholm Nobel Program 2018." 15 undergraduate students from the University of Tokyo participated in the program and we welcomed them together with VIP guests such as H.E. Jun Yamazaki, Ambassador of Japan to Sweden, and H.E. Stefan Noreén, Former Ambassador of Sweden to Japan and Senior Advisor of the Office of the President at the University of Tokyo.

Director Tsumoto gave welcome remarks at the ceremony together with Ambassador Yamazaki and Former Ambassador Noreén.

On September 10, they visited the JSPS Stockholm Office. We talked about our office's activities and then some questions and discussion regarding JSPS international programs as well as Swedish culture were made.



Group photo of the welcome reception at Stockholm University



Group photo with our staff at JSPS Stockholm Office



## **Artificial Intelligence Meets Life Sciences - the 5th RIKEN-KI/SciLifeLab Symposium**

On September 20, Artificial Intelligence Meets Life Sciences – the 5th RIKEN-KI/SciLifeLab Symposium was held at SciLifeLab. This symposium series is jointly organized by RIKEN of Japan, the Karolinska Institutet (KI) and SciLifeLab. From our office, Director Tsumoto and Office Assistant Granström attended.

The symposium was opened with welcome speech by Prof. Olli Kallioniemi, Director of SciLifeLab, Prof. Ole Petter Ottersen, President of KI, and Dr. Piero Carninci, Deputy Director of RIKEN Center for Integrative Medical Sciences. Then, Director Tsumoto introduced the JSPS programs and activities. Approximately 120 participants from academic institutions in both countries got together, and it was a great opportunity for the participants to discuss ideas and create networking with each other.

Please find a report written by Dr. Watanabe on page 16.



Photo at the event

## **The 5th Japan-Lithuania Joint Life Sciences Symposium in Lithuania - a Working Meeting for Funding Organizations**

On September 25, the 5th Japan-Lithuania Joint Life Sciences Symposium with Research Council of Lithuania (RCL), the Embassy of the Republic of Lithuania to Japan and the JSPS Stockholm Office was held. Eight distinguished researchers from both countries included: Prof. Dr. Makoto Asashima, Academic Adviser of JSPS and Academic Adviser/Specially Research Professor of the Strategic Innovation and Research Center at Teikyo University; Prof. Ryuichi Nishinakamura, Director of the Institute of Molecular Embryology and Genetics at Kumamoto University; Dr. Mitsuo Ochi, President of Hiroshima University; and Prof. Taisuke Tomita, Graduate School of Pharmaceutical Sciences at the University of Tokyo. Director Tsumoto gave closing remarks together with Dr. Valdemaras Razumas, Chairman of RCL. Through sharing cutting-edge researches with each other, this symposium was a big step for expanding academic interaction between Japan and Lithuania.

Please find a report written by Prof. Dr. Asashima on page 17.



Group photo of the participants

## Life Sciences Baltics 2018

On September 26, at LITEXPO in Vilnius, Lithuania, Dalia Grybauskaitė, President of Lithuania, and Enterprise Lithuania hosted Life Sciences Baltics 2018. We were invited by the organizer and Deputy Director Yoshihara attended the event.

This event is the only international forum in the Baltic countries gathering global biotechnology, medicine and medical equipment experts, through the exchange of ideas and networking, with the aim of connecting the emerging markets Lithuania and the Baltic Islands with the world. It is held annually and consists of lectures by prominent researchers in the life sciences field and exhibitions by related organizations.

At the lecture, Dr. Ochi, President of Hiroshima University and Prof. Nishinakamura, Director of Kumamoto University's Institute of Molecular Embryology and Genetics, who also appeared at the 5th Japan-Lithuania Joint Life Sciences Symposium held the previous day, were invited speakers and presented their research content. It was a good opportunity for academic exchange in the Baltic countries.



Photo at the event



Dr. Ochi presenting at the event

## SAC Board Meeting

On October 4, SAC held a board meeting through Skype. Chair Göran Thor and Prof. Imre Pázsit attended. From our office, Director Tsumoro, Deputy Director Yoshihara and Office Assistant Tashima participated. The board discussed the upcoming election of new board members, upcoming activities of the Alumni Club, and practical matters related to the call for applications for the Activity Seminar scheme and BRIDGE Fellowship Program FY2019.



Photo of the meeting



## **ACF Board Meeting, General Assembly and Activity Seminar with Prof. Kiyohiko Igarashi**

On October 5, the board of ACF held their 2nd Board Meeting of FY2018. The board discussed topics such as the club's upcoming activities, duties of the board, and new board members.

The meeting was followed by the General Assembly, which was open for all members of the Alumni Club. At the assembly, the activity plan and board members for FY2019 were approved.

Following the Board Meeting and General Assembly, ACF held their Activity Seminar at the Academy of Finland (AF), Helsinki, titled "Science for Better Life", with lectures by Prof. Kiyohiko Igarashi, the University of Tokyo and VTT Technical Research Centre of Finland, and Prof. Michael Gasik, Aalto University Foundation. Opening remarks were given by ACF Chair Ville Syrjälä, followed by information on JSPS programs and activities by Deputy Director Yoshihara, and research grants information by Programme Manager Risto Vilkkö, AF.

The seminar was followed by a reception, where the participants enjoyed networking and discussion about the presentations.

Please find a report written by Prof. Igarashi on page 18.

For information about ACF, please find a report written by Chair Syrjälä on page 28.



Group photo of the participants

## **Sweden-Japan University and Research Leadership Summit**

On October 6, the Sweden-Japan University and Research Leadership Summit where the presidents/vice presidents and representatives of funding agencies of both countries participated, was held in Kyoto, Japan. It was jointly organized by the Embassy of Sweden in Tokyo and the Swedish Foundation for International Cooperation in Research and Higher Education (STINT). This was a follow-up of the Sweden-Japan University President's Summit in 2015. From the JSPS Headquarters, Advisor and former President Dr. Yuichiro Anzai was present. The internationalization strategies of higher education research institutes in both countries and the prospects for proactive academic exchange and cooperation among universities were actively discussed. The participants also recognized the need to focus on long term and inter-disciplinary goals, such as societal challenges and Sustainable Development Goals (SDGs), together with cooperation between academia and industry, as ways to achieve more impact. In the closing remarks, Mr. Yoshio Yamawaki, Deputy Minister of Ministry of Education, Culture, Sports, Science and Technology (MEXT), said: "This summit was an important and useful discussion for the cooperation of universities between the two countries."

## The 15th Science and Technology in Society forum

On October 7, the Science and Technology in Society (STS) forum was held at the National Kyoto International Conference Center. The STS forum has been held annually from 2004 in order to discuss issues related to science and technology and society as common to mankind, with over 1,400 participants from about 80 countries and regions. It is one of the largest scientific conferences in Japan.

To this conference gathered participants from across the world, ranging from various fields such as scientific technology, politics and economics. From Sweden, Harriet Wallberg, Director of the Department of Social Affairs and former President of Karolinska Institutet (KI); Ole Petter Ottersen, President of KI; and Pia Sandvik, CEO of Research Institutes of Sweden (RISE), participated.

On the first day, a keynote speech was given by Prime Minister Shinzo Abe, who is the Honorary Chairman of the forum. Among other things, Prime Minister expressed his determination to accelerate science and technology innovation, referring to making “huge strides ahead” to “turn Japan into a cradle of innovation.”

In the session that followed, active exchanges of opinions were held with such themes as “Sustainable Development” and “Role of Science and Technology Education in Society”. Also, 10 lectures by Nobel laureates including Prof. Shinya Yamanaka, Kyoto University, were given. At the end of the forum, the statement of the general meeting and closing remarks were announced by Koji Omi, Founder and Chairman of STS forum.

The next forum will be held October on 6, 7 and 8, 2019. More information can be found here:

<https://www.stsforum.org/>

## MIRAI Seminar 2018

On October 9 to 12, MIRAI Seminar 2018 was held in Tokyo. This seminar is a part of an inter-university exchange project in which 8 Japanese and 7 Swedish universities have participated, and this is the second seminar since the MIRAI project started in 2016.

On the 1st day, after a pre-meeting at the Tokyo Institute of Technology, a reception was held at the Swedish ambassador's residence in Tokyo.

The plenary session on the 2nd day was held at the University of Tokyo with the theme of “Sustainable Social System and Technology for Aging Society.” In the opening ceremony, Mr. Yamawaki, Deputy Minister of MEXT, and H.E. Magnus Robach, Ambassador of Sweden to Japan, presented the opening remarks. After two lectures and a panel discussion, presentations by funding organization representatives including: Dr. Andreas Göthenberg, Executive Director, STINT; Dr. Joakim Appelquist, Director, the Swedish Governmental Agency for Innovation Systems (VINNOVA) and Mr. Norifumi Ushio, Executive Director, JSPS, shared relevant information.

On the 3rd and 4th day, a total of 4 subcommittees, including themes such as “Ageing”, “Materials Science”, “Sustainability” and “Innovation” were held. The research themes were set up at the University of Tokyo, Sophia University and Waseda University respectively.

Because the MIRAI project is a three-year exchange project, 2018 will be the final year, but continuous exchange by universities of both countries is expected.

For more information regarding the MIRAI project, please refer to their website at: <http://www.mirai.nu/>



Free-Photos (<https://pixabay.com/>)



## Japan-Sweden Science and Technology Joint Statement

On October 10, to mark the 150th anniversary, MEXT of Japan, MER and Ministry of Enterprise and Innovation of Sweden signed a joint statement that reaffirm the importance of, and potential for, cooperation in science and technology between both countries.

Signatories were Mr. Yamawaki, Deputy Minister of MEXT, and H.E. Ambassador Robach, the Embassy of Sweden in Japan.

And as an example of cooperation between the two countries, there were proposals including: “University exchanges”, “international joint research and innovation through funding agencies”, “cooperation through large scale facilities”, and “exchanges and cooperation through science promotion organizations.” The general expectations being to promote exchange and cooperation between the two countries in the field of innovation and higher education.

In connection with JSPS, included are our international program with the Swedish Governmental Agency for Innovation Systems (VINNOVA) and STINT; Nobel Prize Dialogue with the Nobel Media AB. Through these, it is expected that academic cooperation and the promotion of science can be enhanced.

More information and relevant documents can be viewed here (Website in Japanese, Documents available in English):

[http://www.mext.go.jp/a\\_menu/kagaku/kokusai/kyoryoku/1410128.htm](http://www.mext.go.jp/a_menu/kagaku/kokusai/kyoryoku/1410128.htm)

## ACD Activity Seminar with Lecturer Demachi

On Oct 11, ACD held their Activity Seminar at Aarhus University.

The seminar opened with welcome remarks by the seminar organizer Dr. Anette Skovsted Hansen, Associate Professor at Aarhus University and a member of ACD, followed by information on JSPS programs and activities by Deputy Director Yoshihara.

The topic of this seminar was “Japan and African Natural Resources” with presentations given by experts with the common interest of Japan-Africa relations. Invited speakers included Dr. Kazue Demachi, lecturer of Tokyo University of Foreign Studies, and Dr. Sayaka Funada Classen, researcher of Meiji Gakuin University.

The speakers attended a workshop the following day to establish new ties and strengthen further future research collaboration.

Please find a report written by lecturer Demachi on page 19.

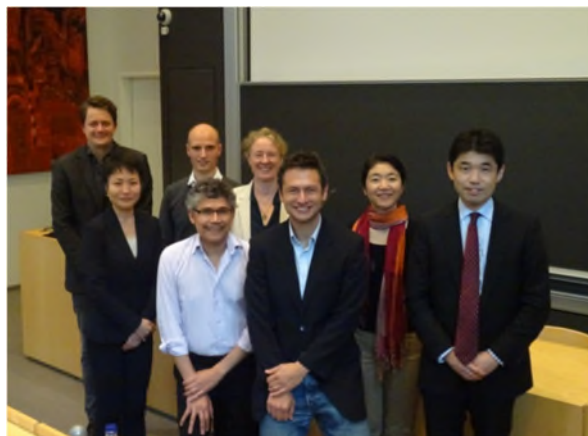


Photo of the lecturers from Japan and Denmark

## Arrival of the New Ambassador, the Embassy of Japan in Sweden

On October 16, H.E. Shigeyuki Hiroki was instated as the new Ambassador of Japan to Sweden. Prior to his current appointment, he served as the Ambassador of Japan to the Republic of South Africa.

H.E. Jun Yamazaki, his predecessor, has been the Ambassador of Japan to Singapore since October 13.

On October 22, Director Tsumoto and Deputy Director Yoshihara met with Ambassador Hiroki and confirmed further collaborations.



Ambassador Hiroki

Source: <https://www.se.emb-japan.go.jp/>

## 2018 Nobel Prize Announcements

### Physiology or Medicine

- **James P. Allison**, USA and **Tasuku Honjo**, Japan  
“for their discovery of cancer therapy by inhibition of negative immune regulation”

### Physics

- **Arthur Ashkin**, USA  
“for the optical tweezers and their application to biological systems”
- **G rard Mourou**, France and **Donna Strickland**, Canada  
“for their method of generating high-intensity, ultra-short optical pulses”

### Chemistry

- **Frances H. Arnold**, USA  
“for the directed evolution of enzymes”
- **George P. Smith**, USA and **Sir Gregory P. Winter**, UK  
“for the phage display of peptides and antibodies”

### Peace

- **Denis Mukwege**, Democratic Republic of the Congo and **Nadia Murad**, Iraq  
“for their efforts to end the use of sexual violence as a weapon of war and armed conflict”

### Economic Sciences

- **William D. Nordhaus**, USA  
“for integrating climate change into long-run macroeconomic analysis”
- **Paul M. Romer**, USA  
“for integrating technological innovations into long-run macroeconomic analysis”

### Laureate Information



**Prof. Tasuku Honjo**

**Kyoto University Institute for Advanced Study, Deputy Director-General and Distinguished Professor, Nobel Laureate in Physiology or Medicine**

Tasuku Honjo was born in 1942 in Kyoto, Japan. In 1966 he became an MD, and from 1971-1974 he was a research fellow in USA at Carnegie Institution of Washington, Baltimore and at the National Institutes of Health, Bethesda, Maryland. He received his PhD in 1975 at Kyoto University. From 1974-1979 he was a faculty member at the University of Tokyo and from 1979-1984 at Osaka University. Since 1984 he has been Professor at Kyoto University. He was a Faculty Dean from 1996-2000 and from 2002-2004 at Kyoto University.

Source: <https://www.nobelprize.org/>



## The 1st JSPS Alumni Club in Sweden Activity Seminar of FY2018

**Teruhiko Wakayama**, Professor, Reproductive Biotechnology, University of Yamanashi

A seminar organized by the JSPS Alumni Club in Sweden (SAC) titled “Environmental Impact on Reproduction and Fertility” was held at Sweden’s Linköping University from August 22 to 23, 2018. The seminar was aimed primarily at specialized researchers in the fields of reproduction and fertility, so not many researchers and students from other fields attended. However, the seminar connected mammalian reproduction and environmental studies, which is an important area of study for all people. The seminar was organized by Dr. Manuel Álvarez-Rodriguez, who visited my laboratory from February to June of last year to learn how to use “micromanipulators.”

There are a lot of researchers studying the relationship between environment and reproduction at Linköping University, and Dr. Rodriguez is also conducting research about spermatozoa of wildlife. But when some environmental factors affect the spermatozoa, the motility falls in most cases. As a result, those spermatozoa lose their potential and therefore, the ability to study a sperm nucleus or fetus is reduced because the spermatozoa fail to fertilize the oocytes.

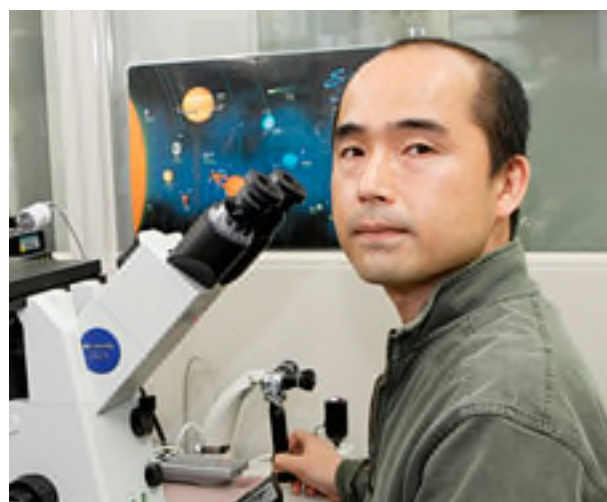
Dr. Rodriguez thought that it would be possible to examine the influence on spermatozoa or fetuses through the use of a micromanipulator, because this machine is often used in reproductive studies, such as in vitro fertilization or animal cloning. Healthy offspring can be made even from weak or dead spermatozoa using a micromanipulator; however, it is extremely difficult to master the techniques completely. Therefore, Dr. Rodriguez applied for a JSPS fellowship program and succeeded in getting this grant. Then, he came to my laboratory to study and acquire the micromanipulation techniques because these are our strong point.

A micromanipulator is a tool that translates the movement of a hand into micro movement. When the techniques are mastered, it becomes possible to freely handle microscopic oocytes and spermatozoa that cannot be seen by the naked eye. It is possible to inject the spermatozoa into the oocytes and in turn produce offspring. But this requires delicate and precise micro level movements, and if the person is not highly motivated and dexterous, these techniques will be difficult to study and maintain. Indeed, highly motivated students who joined my lab had to practice diligently, without rest, for half a year before finally grasping the techniques. Therefore, when Dr. Rodriguez came to study micromanipulator techniques, and the period of his stay was less than half a year, I was worried whether it would be possible for him to learn these techniques within this short a period. However, when Dr. Rodriguez joined my lab, he started to practice more diligently than any of my previous Japanese students, and managed to acquire the main techniques within only three months. This is probably the

fastest anyone has acquired the techniques among all my previous researchers and students. Unfortunately, as his study abroad period drew to an end, Dr. Rodriguez was not able to begin his original experiment at my laboratory. However, I was very pleased to confirm that he was using the techniques I had taught him at my lab when I attended this seminar in Linköping.

Meanwhile, when Dr. Rodriguez stayed at my laboratory, I asked my students to teach him the basic techniques. What surprised me was that while the students said that they were not good at English, they did their best to communicate, making sure they taught Dr. Rodriguez the techniques, and the effort was successful. Generally speaking, it is difficult to teach the techniques of micromanipulation even through the Japanese language, let alone with crudely translated teaching in English. I guess that Dr. Rodriguez had a very hard time understanding their English. But the students who were in charge of the teaching gave intense thought to the contents and procedures before approaching Dr. Rodriguez. They were probably studying English and science much more seriously for this than for their usual classes. One might call this a great example of teaching methods. After finishing his period of study abroad, Dr. Rodriguez continued his research in Sweden, successfully using the acquired techniques. Although it has been only less than half a year, it is nice to see my student still active abroad. Also, because of this now there is a newly established overseas laboratory with shared techniques and knowledge, so there are now more laboratories to collaborate with overseas, which will contribute greatly to the development of future research.

I would like to thank all of you at JSPS Stockholm Office who supported Dr. Rodriguez’s study abroad for your support and for hosting this event, and I hope as well to continue this very fruitful cooperation in the future.



Prof. Wakayama

Source: Riken (<http://www.riken.jp/pr/topics/2010/20100929/>)

## The 5th RIKEN-KI/SciLifeLab Symposium at Karolinska Institutet “Artificial Intelligence Meets Life Sciences”

**Yasuyoshi Watanabe**, Program Director/Team Leader, RIKEN Center for Biosystems Dynamics Research

This symposium series is jointly organized by RIKEN in Japan, the Karolinska Institutet (KI) and SciLifeLab; and is supported by the JSPS Stockholm Office. The symposia alternately between RIKEN and SciLifeLab. The overall main goals of the symposia are: a) to identify common scientific interests between RIKEN and SciLifeLab, b) to identify complementary skills and technologies for collaborations, and c) to encourage the exchange of PhD students and postdocs between RIKEN and SciLifeLab/KI. Several collaborations between groups at KI, SciLifeLab and RIKEN started based on the first contact during one of the symposia. There are several examples of PhD students from KI and SciLifeLab visited RIKEN for a research stay.

Each symposium is centered on one specific topic. Topics from previous years are: Molecular Imaging and Genomics (2014), Structural Biology for Drug Discovery (2015), Decoding Health and Disease with a) Imaging & Disease, b) RNA & Disease, c) Single, Rare and Stem cells & Disease (2016), Life Science Frontiers in Health, Disease and Aging, with sessions a) Gene Expression in Disease and Aging, b) Neural Function, Disease and Therapy, c) Molecular Aspects of Health, Disease and Aging, d) Visualizing Health, Disease and Aging, e) Molecular Network Control (2017). There were around 100 to 150 participants for each symposia. The previous topics covered a broad range of the SciLifeLab groups from Stockholm and Uppsala. The previous symposia held in Stockholm had participants from all around the Stockholm and Uppsala regions. For each symposium we had an organization group with participants from RIKEN and SciLifeLab. The organizing members were composed based on the topics.

This time, the symposia was held at the Air & Fire auditorium at SciLifeLab and titled: “Artificial Intelligence Meets Life Sciences.” Recently, a variety of life science, medical science, and health science are utilizing AI; especially, machine learning, deep learning, Bayesian inference, Markov constraint, and so forth for different purposes and angles. Totally eighteen presentations from three parties were collected by the organizing committee headed by the representatives of each party; Prof. Olli Kallioniemi (SciLifeLab, Director), Prof. Ole Petter Ottersen,

(KI, President), Dr. Piero Carninci (RIKEN Center for Integrated Medical Science, Deputy Director), Dr. Carsten O. Daub (KI/SciLifeLab and RIKEN), and Dr. Erik Arner (RIKEN IMS, Team Leader), and it was quite successful. Similar symposium was held world-wide, but this symposium contained actual cutting-edge approaches and knowledge, which excited all participants including young generations. The symposium consisted of three sessions: Clinical Applications of AI, Bioimage Bioinformatics with AI, and Current Challenges in AI for Life Sciences. All talks were quite stimulating, informative, and covered topics in a wide range of life science, medical science, and health science. On the 2nd day, the organizers and members of three parties gathered to discuss the future collaboration, some were very specific and others were looking for the possibilities in near-future. The imaging group visited new KI imaging facilities, such as the newly built huge spaces for PET clinical imaging in KI hospital, for discussion on further collaboration with RIKEN/Japanese collaborators.

The organizers and all members of the symposium would like to extend sincere thanks to Prof. Tadaharu Tsumoto, Director, and his colleagues of JSPS Stockholm Office for their generous supports.

For detailed information on the program, please refer to here: <https://www.scilifelab.se/events/artificial-intelligence-meets-life-sciences-5th-riken-kiscilifelab-symposium/>



Dr. Watanabe presenting at the event



Photo at the event



## The 5th Japan-Lithuania Joint Life Sciences Symposium in Lithuania

**Makoto Asashima**, Academic Adviser of JSPS, Academic Adviser/Specially Research Professor of Teikyo University

On September 25, 2018, the joint symposium was held in Vilnius, the capital of Lithuania. Organizers were the Research Council of Lithuania (RCL), the Embassy of the Republic of Lithuania to Japan, and the JSPS Stockholm Office. Director Tsumoto and some staff participated from the office.

At the welcoming reception held on the 24, the day before the symposium, Lithuanian Ambassador Gediminas Varvuolis and Japanese Ambassador Shiro Yamasaki gave speeches about both countries' academic collaboration. Both ambassadors were extremely pleased that they were able to meet each other for the first time on this occasion.

At the symposium on the 25, several lectures were held throughout the day. The program was well coordinated, and combined two speakers from each country with similar research themes. Speakers from Japan included Prof. Ryuichi Nishinakamura (Kumamoto University), President Mitsuo Ochi (Hiroshima University), Prof. Taisuke Tomita (the University of Tokyo), and myself. The lectures focused on cutting-edge topics in recent life sciences, such as regenerative sciences, neuroscience, bone repair and Alzheimer's disease. After lively discussions, the symposium successfully ended with closing remarks by Director Tsumoto and Dr. Razumas, Chairman of RCL. It was a very productive event.

This Japan-Lithuania joint symposium started in 2014, and has been held alternately in both countries basically every year. This time was the 5th symposium. In Japan, it has been held at the University of Tsukuba, the University of Tokyo, and Tokyo University of Science with not only professional researchers, but also students participating.

As a result of these symposia, the number of both countries' research project themes has now expanded from three to fifteen. There are some researchers engaged in joint research projects like Prof. Tomita. The fields involved include not only natural and medical sciences but also humanities and social sciences. In particular, life sciences research is exceptionally flourishing in Lithuania, therefore many foreign companies have participated in research activities and held international conferences. Advanced technologies like medical information and agricultural sciences have also progressed. For example, the knee joint cartilage repair treatment lectured on by Dr. Ochi has had significant results, and it attracted great interest as a practical application of regenerative medicine. Researcher exchanges between both countries have also been active, for instance, a young Lithuanian kidney researcher has taken part in Prof. Nishinakamura's lab at Kumamoto University.

The RCL building, which was the venue for this symposium, is located in the beautiful, calm atmosphere of the old town, a designated World Cultural Heritage site. The interior this building is also a memorable place for me, since I was

elected as a foreign member of the Lithuanian Academy of Sciences and gave a commemorative lecture there last year. The weather in Lithuania was extraordinary this year. The temperature on the 25 was chilly, reminiscent of late autumn, even though the two previous days had been as hot as summer. All the participants were astonished. The Pope's visit to Vilnius on the 24 was also big news at the time.

Lithuania is one of the Baltic countries, belonging to the EU together with Estonia and Latvia, but each country has gone through its own historical transitions and the cultures are quite different. I am impressed by the Lithuanian people's diligence, and by their friendship with Japan, which Mr. Chiune Sugihara has helped foster.



Prof. Dr. Asashima during his presentation



Photo at the event

## The Activity Seminar organized by JSPS Alumni Club in Finland in Helsinki

Kiyohiko Igarashi, Professor, the University of Tokyo, VTT Technical Research Centre of Finland

On October 5, 2018, at the Academy of Finland in Helsinki, the ACF Activity Seminar was held entitled “Science for Better Life”. I delivered a lecture on the subjects of my research titled “Enzymes for Biomass Utilization: How do Difficult Biotechnologies Contribute to Bioeconomy?”

In recent years, extreme weather, which seems to be due to climate change, has frequently occurred in Japan as well as in other parts of the world. Torrential rain which should be happening once every several decades has instead manifested themselves during the last two years, and the damage caused by a super-typhoon is occurring every summer. In such situations, the “Bioeconomy”, in other words, “an economic activity that does not put a burden on the biosphere” has attracted attention. The European Commission defines the Bioeconomy as “the production of renewable biological resources and the conversion of these resources and waste streams into value added products, such as food, feed, bio-based products and bioenergy. Its sectors and industries have strong innovation potential due to their use of a wide range of sciences, enabling industrial technologies, along with local and tacit knowledge,” but I believe the fundamental idea is: “Fair-trade against the Earth.” Fair-trade is a mechanism to support the sustainable life of producers by continuously trading products made in developing countries at appropriate prices, and it is becoming popular for chocolate and coffee products all over the world. When this concept is applied to the Earth, for example, petroleum and coal are organic materials made by the activities of ecosystems for hundreds of millions of years, and the producer is the Earth itself. However, human beings exploit them without paying any consideration to the producer, the Earth, and they produce energy and materials for their benefits. Moreover, we use it with a straight line towards waste and carbon dioxide without following the material circulation on the Earth, and continue to spoil the ecosystem. In other words, it is said that the current situation is not only exploitation from producers, but also putting a heavy burden on producers. Bioeconomy is the idea of improving such human activities and realizing fair-trade against the Earth.

I am working on the utilization of biomass, i.e., making personal belongings and fuels from biomass as a raw material. However, while it actually does not change the performance of the products—in comparison to other resources normally used for the same process—we have used up until now, we sometimes have to pay more money for biomass related products than other more normal alternatives. For that reason, it seems that not only many Japanese enterprises, but also governments and its citizens will not accept biomass as an alternative. However, when we look at things across a longer span, it will be better to actually promote Bioeconomy, from the viewpoint of

“economy”, instead of the current economic principle that “cheap and durable is good.” Is it not more economically valuable, assuming the current negative environmental trends continue; when resources are discarded or burned and our lives themselves are threatened by the burden on the Earth, one should consider the long term economically valuable alternative? In recent years, phrases such as Sustainable Development Goals (SDGs), Paris Agreements and microplastic issues, etc. are seamlessly created as to be mere keywords and banners of global warming. This is because the Earth is screaming, and if climate change and heavy rain, etc. are appearing as its “Phenotype”, it is important to follow the rules of the Earth in order for humans to continue to live on.

From this fiscal year, we started “One Earth Guardians Training Program” to foster “human resources who can act for the Earth after 100 years” at the Faculty of Agriculture at the University of Tokyo. We aspire to teach young people, who bear the responsibilities of the future society, to literally see things from the perspective of “protect the Earth”. And through this, we hope that such activities will spread all over the world.

In addition to the participants of the JSPS Alumni Club, many Japanese students studying at the University of Helsinki also participated in this lecture. It was a very meaningful group of people, because, at the discussion and reception held after the lecture, we discussed topics, which we cannot usually do, such as what it is to live while thinking about the Earth and what is to work with Nordic working philosophies. I wish occasion will help them to have a good hope in their continued school and social life.

Finally, I would like to note that 2019 marks the 100-year anniversary of diplomatic relations between Japan and Finland and also the 10-year anniversary of the establishment of JSPS Alumni Club in Finland (ACF). In this sense, I do hope that academic collaborations between the two countries will be further enhanced through some activities organized by ACF.



Prof. Igarashi presenting at the event

## The JSPS Alumni Club in Denmark Activity Seminar at Aarhus University

**Kazue Demachi**, Lecturer, African Studies Center, Tokyo University of Foreign Studies

A seminar organized by the JSPS Alumni Club in Denmark (ACD), titled “Japan and African Natural Resources” was held on October 11, 2018, at Aarhus University, Denmark, and I was invited to report my research. The seminar was organized by Dr. Annette Skovsted Hansen, Associate Professor and a member of ACD, at Aarhus University. Dr. Hansen is a Japanologist who also have recently been conducting her research also in a West African country, Ghana. My communication with Dr. Hansen started through a Ghanaian researcher, who is our mutual acquaintance, and also my research collaborator in Ghana. The seminar set “natural resource” as a key theme, and six researchers reported on the relationships between Japan and Africa.

A wide range of things are included in the theme “natural resource.” In the context of African studies, natural resources are commodities such as mineral resources or agricultural products, or non-tradable such as land and forest. In the seminar, some reports were on the issues related to energy resources, while the others were on the issues of land and commodities. The geographical area of the researched coincided, while the disciplines, as well as the background of researchers, widely differed. Some were political scientists, and some were historians. We discussed the topics around the economies, politics, power, and the historical relationships between Japan, Africa, and Latin America. The seminar was open for students, and they also joined in our discussion. I reported on my research titled “New African Debt and Natural Resource,” an analysis on the recent increases in the external debts of the governments of the Sub-Saharan African countries, and an examination of the impacts of new debts on the countries, but especially the natural-resource-dependent ones.

The debt overhung of Sub-Saharan Africa kept their economy stagnated all through the 80s and 90s, but after the completion of the process of the international debt cancellation scheme in the middle of the 2000s, their debt size has been largely reduced. In the meantime, the low international interest rates in the 2000s, coupled with the resolution of the old-debt problem, have induced the inflow of capital into African countries, resumed bilateral lending, and multilateral lending. African countries even started to issue Eurobond. My report discussed how new debts since after the 2000s are affecting the African economies, which was led by the core question: whether the African debt problem is really over, or are they repeating the same. Stabilization of macroeconomy is one of the major challenges for the developing economies depending on the export of natural resources such as crude oil and natural gas. The increase in external debt and fiscal spending during the economic buoyancy, and the fiscal crisis and reduction in government spending during the downturn are regarded as fiscal pro-cyclicality. This pro-cyclicality, coupled with the

price volatility of international commodity prices, harms long-term growth and macroeconomic stability. I shared the results of my current analysis that the resource-dependent economies are not necessarily borrowing more than their peers. Thus the risk of macroeconomic instability induced by the current accumulation of external debt is not high so far. On the other hand, new debt is not fostering investment of the African countries, but do pushing consumption, which is problematic. This suggests that the recent accumulation of external debt still has risks, and better debt management is required.

Various comments were offered by the participants. Some pointed to the relationship between African debt cancellation and the world economy, and we also discussed the implication of the experiences of the Latin American countries. The other also referred to the questions around the sovereignty, corruption, and debt in Mozambique, which has already defaulted on its debt in 2006.

The other lectures in the seminar were: “A critical Historical Review of Japan’s Involvement in the Global Agro-Food System through Imperialism, Aid, Diplomacy, and Investment: 1890s to the Present”; “Triangular Cooperation Brazil-Japan-Mozambique: The Transplantation of the Brazilian Cerrado Experience to Africa and its Socio-Environmental Implications”; “Power Politics and the Chad-Cameroon Pipeline Project: A Case Study of Oil, Wealth, Security, and National Interest in Chad”; “Developing a CSR Strategy in the Natural Resources Sector in Ghana”; and “Slaves, Fish, and Oil in the Japanese and Danish Involvement in the Transformation of two Ports of Ghana.” The discussion was so active and continued even after the seminar. This academic collaboration is still at an exploratory phase, but given the fact that every international collaboration requires running phase before it takes off, we are grateful for the support this time by the JSPS Stockholm Office. We will keep building up our ties for further collaboration in the future. Shall we meet next time in Africa, Japan, or Latin America?



Dr. Demachi presenting in front of the audience



## 2018.8.31 Visit by Mr. Kazuya Hashimoto, JSPS Head Office

Mr. Hashimoto, Head of the International Research Cooperation Division II, and Ms. Yana, Overseas Fellowship Division, visited the JSPS Stockholm Office. They were visiting Stockholm for the purpose of attending the Pre-Summit ahead of the Sweden-Japan University and Research Leadership Summit on August 29, and the 7th Japan-Sweden Joint Committee on Science and Technology Cooperation that was held on August 30.

We exchanged views and information on JSPS programs and the academic exchange between Japan and the Nordic/Baltic countries.



Front row, left to right: Deputy Director Yoshihara, Ms. Yana, Director Tsumoto and Mr. Hashimoto

Back row, left to right: Ms. Tashima, Ms. Igei and Mr. Ishida

## 2018.9.6 Visit by Mr. Takahiko Sato, Yokohama City University (YCU)

Mr. Takahiko Sato, Manager for Office of International Exchange, visited the JSPS Stockholm Office. He visited Stockholm with intentions to visit several universities to look towards further international collaborations. We talked about how to expand the collaboration between YCU and Swedish universities, and exchanged opinions on the globalization of universities.



Deputy Director Yoshihara, Mr. Sato and Director Tsumoto

## 2018.9.12 Visit by Vice President Yasuhisa Kanaguchi and Director Kaz Matsushita, Kanda University of International Studies

Prof. Yasuhisa Kanaguchi, Vice President and former Director of JSPS London Office, and Mr. Kaz Matsushita, Director of the Office of Faculty Affairs, visited the JSPS Stockholm Office. They visited Sweden with intentions to look for further international collaboration. We discussed how to expand collaboration with Swedish universities through academic interaction, students exchange and globalization of universities.



Deputy Director Yoshihara, Vice President Kanaguchi and Director Matsushita

## 2018.9.14 Visit by Prof. Hiroki Ueda, the University of Tokyo

Prof. Hiroki Ueda, Graduate School of Medicine and RIKEN Center for Biosystems Dynamics Research (BDR), visited the JSPS Stockholm Office. Prof. Ueda visited Sweden to present at a seminar in Stockholm and Lund. Prof. Ueda shared the current status of his research, and we gave information on JSPS international programs and upcoming events. We talked about possible further collaborations in the future.



Deputy Director Yoshihara, Prof. Ueda and Ms. Igei

## 2018.9.19 Visit by Prof. Masayuki Amagai, Keio University

Prof. Masayuki Amagai, Dean of the School of Medicine, visited the JSPS Stockholm Office. We exchanged views and information about collaboration between Sweden and Japan in the medical field. He visited Stockholm to make a presentation at a Named Lecture which was held at the Karolinska University Hospital.



Deputy Director Yoshihara, Dean Amagai and Director Tsumoto

## 2018.9.21 Visit by Mr. Noriyoshi Masuko, JSPS Head Office

Mr. Masuko, Senior Managing Director, and Ms. Mayu Yoshinaka, Overseas Fellowship Division, visited the JSPS Stockholm Office. We shared information on our recent activities and discussed the success of the IVA-JSPS seminar which was held on the previous day, September 20.



Front row, left to right: Deputy Director Yoshihara, Senior Managing Director Masuko, Ms. Yoshinaka and Director Tsumoto

Back row, left to right: Mr. Ishida, Ms. Tashima and Ms. Igei

## 2018.09.26 Meeting with Ambassador at the Embassy of Japan in Lithuania

Director Tsumoto, Deputy Director Yoshihara and International Program Associate Ishida paid a courtesy visit to the Embassy of Japan in Lithuania and met with Ambassador H.E. Shiro Yamasaki. After thanking the ambassador for attending the 5th Japan-Lithuania Joint Life Sciences Symposium held on the previous day, the ambassador provided information on the situation of Lithuania and Japan collaboration, mainly on bilateral exchange projects.

In addition, the ambassador shared information on university restructuring in Lithuania and information on the status of Japanese researchers in Lithuania. We also confirmed that we will exchange information at any time in order to promote academic exchange between the two countries in the future.



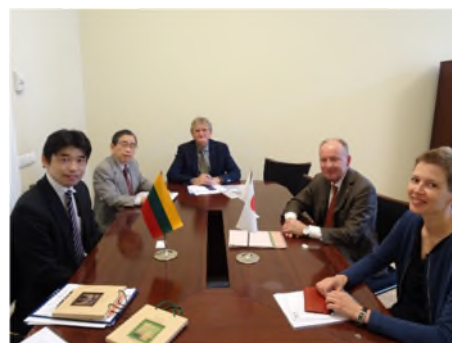
Mr. Ishida, Ambassador Yamasaki, Director Tsumoto and Deputy Director Yoshihara

## 2018.9.26 Meeting with RCL Chairman at RCL

Director Tsumoto, Deputy Director Yoshihara and International Associate Ishida visited the Research Council of Lithuania (RCL), met with Prof. Valdemaras Razumas, Chairman, Prof. Ričardas Rotomskis, Vice Chairman of the RCL and Chairman of the Committee of Natural and Technical Sciences and Dr. Živilė Ruželė, Chief Officer of the International Programmes Unit. After expressing gratitude for holding the 5th Japan-Lithuania Joint Life Sciences Symposium on the previous day, we gave information on the situation of Lithuania-Japan exchange regarding JSPS's international projects.

Chairman Razumas informed about the overview of RCL. Also, Vice-Chair Rotomskis suggested a proposal to promote further exchange between the two countries. After exchanging opinions between the two sides, we confirmed that we will continue to exchange information from time to time in order to strengthen cooperation.

After the meeting, we visited the Lithuanian Academy of Sciences in the same building with the invitation of Chair Razumas and had a meeting with Prof. Jūras Banys, President.



Deputy Director Yoshihara, Director Tsumoto, Prof. Rotomskis, Prof. Razumas and Dr. Ruželė



Right: Mr. Ishida, Deputy Director Yoshihara, Director Tsumoto, Prof. Banys and Prof. Razumas

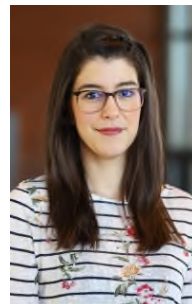
On the following pages, we'll introduce reports from participants of the FY2018 JSPS Summer Program. This year's program was held between June 12 and August 22 and the following six young researchers from Sweden visited Japan to learn more about the Japanese research system and gain invaluable experiences. We have also posted these reports on our website: <https://www.jsps-sto.com/fellowships-3/report-2-2-3/>  
Please enjoy their reports.

**Name:** Anna Martín Vilardell

**Title:** Postdoc researcher

**Institution:** Karlstad University

**Host Institution in Japan:** Nagoya University



### **Whether I was able to conduct my research according to my plan:**

Prior to my arrival in Japan, a research plan was set up for the two-month fellowship Summer Program. In my case, the project involved a triple collaboration among Japan, South Africa and Sweden. The samples were manufactured in advance, and were sent to be tested in Japan at the beginning of my stage. During these two months, I was able to perform the microstructural and mechanical characterization that was established in the main plan. Due to the limited amount of time, a 2nd batch of samples was not able to be characterized. However, the collaboration is moving on after these two months of research. New ideas are coming up and new future projects may be developed.

### **Accomplishments and experiences I have never got unless I joined the Summer Program:**

This summer course has been very helpful to establish collaboration with Japan, and put in contact with Karlstad and Nagoya Universities. Definitely, we would not have been able to establish such collaboration without the Summer Program. We obtained good results and a report is ongoing. It has been a good opportunity to set up a project together, to share knowledge, and what is more important, to develop new ideas for future projects.

### **How do I make good use of this experience in my future research:**

The Summer Program gave me the chance to conduct research in an international environment. This is a very important point to keep pursuing my international research but also my professional career. It has been a good scientific but also personal experience. I learned new knowledge, got to know many people and worked/interacted with different cultures.

### **Message for future participants:**

Apply, it is free! You will live many enjoyable experiences. You will work a lot, but also enjoy even more. Japanese culture is awesome. Beware of the weather! It will be too much rain in June and too much heat in August! However, you will have the chance to discover beautiful places, taste delicious food, learn about the culture, and meet a lot of nice people. You will be astonished by the amount of surprises that Japan has for you! Definitely, an unforgettable experience!

**Name:** Carl-William Palmqvist

**Title:** PhD-student

**Institution:** Lund University

**Host Institution in Japan:** Chiba Institute of Technology



### **Whether I was able to conduct my research according to my plan:**

Throughout the duration of the program, I was able to travel extensively, conduct field work and several interviews, and analyze Japanese data. While this was all part of the plan, I was surprised by how much I was able to do in such a short period of time, largely thanks to the great hospitality and generosity of my host professor and his students, which was really a key to the whole experience. We also managed to write a conference paper together, which was not really part of the original plan. Overall, things went according to plan, but a little better.

### **Accomplishments and experiences I have never got unless I joined the Summer Program:**

I was able to work with a well-respected authority in my field and establish collaboration with him and his students. This also allowed me to make several important connections with other excellent researchers whom I would



otherwise never have met. The amount of travel that I was able to do, and how much I was able to see in both a professional and personal capacity, would never have been possible without the Summer Program, and I would never have had such an introduction to Japan and its culture. It was also one of the best summers of my life.

**How do I make good use of this experience in my future research:**

The data I was able to collect provides material for several papers. Even more importantly, the collaboration I established with the host researcher and his students will continue: we have already submitted one paper together, another one on the way, and ideas for more. I also met key figures in both research and industry, which will be very valuable for my future career, both in enabling a return to Japan, and in opening doors to other international research and career opportunities. Finally, I hope to return to Japan soon to keep the connections alive, and to start some joint projects.

**Message for future participants:**

(i) Try to meet and get to know the host researcher before you leave, as a close relationship with his/her doors wide open. (ii) Try to have an idea of what you will do and to have data to work with right away, because once in Japan, it's going to be intense in a lot of ways. (iii) Get and use a JR pass. It's amazing. (iv) Don't be afraid to take some time off to travel and experience things, which is a part of the point. And (v) Just go for it, and it's going to be a blast and you won't regret it.

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**Name:** Julen Goicolea

**Title:** PhD-student

**Institution:** Karolinska Institutet

**Host Institution in Japan:** The University of Tokyo

**Whether I was able to conduct my research according to my plan:**

Despite the relatively short research time that I had in Japan, I was able to get preliminary results on the study that I arranged prior to my departure. Not only that, but also thanks to the excellent guidance that I got from the host institution supervisor and colleagues, I was able to fully design and set a completely new approach to study my protein of interest. Due to this I would like to say that my stay in Japan exceeded my research plan.

**Accomplishments and experiences I have never got unless I joined the Summer Program:**

Regarding my research, I developed very valuable cell-lines for my project at home and I have learned very useful lab techniques that will definitely be helpful in future projects. About my personal experience, I had the chance to discover a completely different culture and meet very interesting people that otherwise would not have met. Also, I travelled to different places in Japan often with other Summer Program fellows. The chance to meet and live for a weekend with a native Japanese family was a very rewarding experience from which I learned a lot.

**How do I make good use of this experience in my future research:**

This experience has given me the tools to push my research forward in various ways. First, I can keep working with the cells that my colleagues and I developed during this summer in Japan. Second, I have gained invaluable experience just by learning and working side by side with so many amazing people, both professionally and personally. Third, this great experience opened up the possibility to establish collaboration between my group in Sweden and my host institution in Japan in the future.

**Message for future participants:**

Do not waste your time. Work, learn and travel as much as you can. Be open-minded and experience this amazing country every single day of your stay. It is totally worth it. This whole program is a unique experience that nobody should miss.

**Name:** Piergiuseppe Mallozzi

**Title:** PhD-student

**Institution:** Chalmers University of Technology

**Host Institution in Japan:** Waseda University



**Whether I was able to conduct my research according to my plan:**

As soon as I arrived at Waseda University, I was welcomed by my host supervisor. We scheduled some meetings with the PhD student I was going to collaborate with and got the research started straight away! Thanks to the enormous support of the PhD student, I managed to start and conclude a project in only two months. We are in the process of writing a paper about our joint work.

**Accomplishments and experiences I have never got unless I joined the Summer Program:**

I wouldn't have started this amazing collaboration with the research group there. I learned new techniques and met so many interesting people. Also, the Summer Program gave me the opportunity to visit other research groups in Osaka, Kyoto and Okinawa! It was amazing. I learned so much and that impacted my research, steering it in a different way. I had some seminars at different universities and received valuable feedback. Finally, the PhD student I collaborated with at Waseda University is coming to visit me in Sweden to continue the collaboration, which is amazing!

**How do I make good use of this experience in my future research:**

Dealing with different research groups gave a broad prospect on the field, but also made my research ideas stronger as I was presenting them to different communities. I will continue the collaboration with the professors and PhD students I met and this will have a positive impact on my research.

**Message for future participants:**

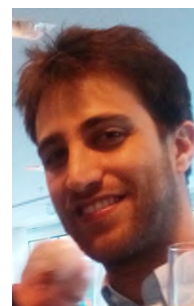
Enjoy every single day because two months is not a lot of time! I was lucky to be in a vibrant and amazing city like Tokyo. I loved my time there so much! Travel as well and visit other JSPS fellows. The connections with them are one of the best things of the program!

**Name:** Javier Cruz

**Title:** PhD-student

**Institution:** Uppsala University

**Host Institution in Japan:** Ritsumeikan University



**Whether I was able to conduct my research according to my plan:**

The project I intended to develop in Japan was a new kind of open microfluidics. The idea was in a very early stage of development, so the main purpose of the collaboration was to discuss and evaluate different processes that would enable the creation of such devices, which would offer very interesting properties. After sharing our knowledge and experience, we were indeed able to do the fabrication with high precision and perform preliminary experiments for the evaluation.

**Accomplishments and experiences I have never got unless I joined the Summer Program:**

Developing new technology requires creative thinking. Therefore, new perspectives to a problem benefit from discussions with experts in the field. By meeting Prof. Konishi's team, I was able to forward the technology to the

point where it is ready for the evaluation of the performance. Whether I would have been able to do it or not without the Summer Program is uncertain, but what is clear is that it would have taken much longer time.

**How do I make good use of this experience in my future research:**

A very important part to be successful in research is to have a good network of colleagues who walk the path with you. Regarding my international relationships, I gained a lot through the JSPS Summer Program. As I feel it, we created strong ties between the teams that will likely lead to future collaborations in both directions, and possibly further exchange of students.

**Message for future participants:**

Enjoy this wonderful experience to come! You will be delighted that the Summer Program is incredibly well organized and you will have time to enjoy your time in many ways: working, traveling, meeting a number of interesting people, and encountering wonderful nature (including spiders the size of a fist; you'd better follow the paths when you hike) etc. Go for it!

**Name:** Veronica Wallangen

**Title:** PhD-student

**Institution:** Stockholm University

**Host Institution in Japan:** National Institute of Radiological Sciences (NIRS)

**Whether I was able to conduct my research according to my plan:**

My research topic during my stay in Japan, related to detector development for Positron Emission Tomography (PET), differs significantly from my main area of research within high-energy physics. Even though I had to dedicate some time to learn about the specific details of the project I was working on as well as the field as a whole, I managed to complete the task I was set out to perform during this short two-month visit. As usual in research, there were some unexpected bumps along the road, this time related to the experimental equipment, but overall the project was concluded successfully and I gained a ton of new knowledge along the way.

**Accomplishments and experiences I have never got unless I joined the Summer Program:**

The Imaging Physics Team at NIRS, which is the research team I got the honor of being part of during the Summer Program, is one of the most prominent teams in the field. Working with these highly skilled and experienced researchers was certainly a unique opportunity, which was made possible by participating in the program. It was also a highly enriching experience on a personal level, as the program offers a perfect balance between exposure to cutting-edge research and immersing the fellow into the Japanese lifestyle by several interesting cultural experiences, language classes and a homestay experience. It is a perfect chance to get in touch with Japanese people and create lifelong connections. I learned a tremendous amount from the Japanese way of living and behaving, and will most likely carry many of the Japanese customs and traditions with me in my everyday life from now on.

**How do I make good use of this experience in my future research:**

Both the knowledge gained and the professional contacts made during the program are certainly invaluable for my future career. I also got the opportunity to gain experience within a field with a different focus from my own main research path, which is essential to developing my career in the direction I desire. Apart from being a great merit in my CV and in future job applications, I am aiming for a joint publication with team members at my Japanese host research institution.

**Message for future participants:**

To make the most of these two months, I advice trying to keep a good balance between your work and experience Japan has to offer apart from research. The general work ethic in Japan displays an impressive dedication, and you will have a fantastic opportunity to perform at your best and accomplish great research results. However, equally important is to make sure to take the time to experience the culture, the beautiful nature and connect with the wonderfully hospitable people of Japan as well as other JSPS fellows. I highly recommend investing some efforts in learning Japanese, it will undoubtedly enhance your experience. All in all, be prepared to be swept away by everything extraordinary that is Japan! The JSPS Summer Program contributed to one of the best summers of my life, both professionally and personally.



## The Role of Universities and the Tree of Knowledge

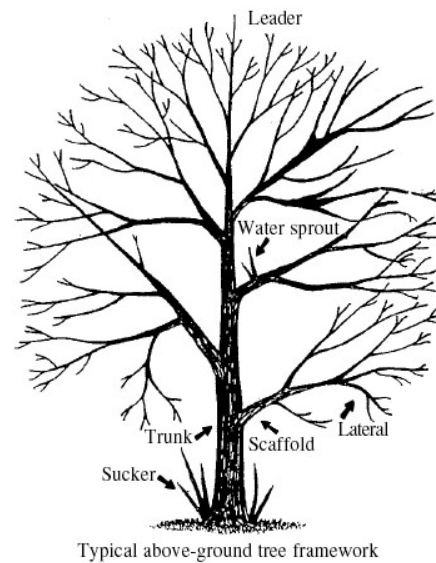
Viktor Granström, Office Assistant, JSPS Stockholm Office

I studied at Saga University in Japan during 2013-2014 as a part of a one year exchange program, and during this period I was especially fond of a class, titled *Japanese #2*, that had a special approach on learning the language. The teacher sought to invite regular Japanese students from the university to participate in having more deep discussion on difficult topics together with the foreign students and one of them was me. There was a particular topic that intrigued me, and still does even today, that I want to share in this column.

There was an article that laid the basis for the discussion in the class, which unfortunately I, and the teacher who provided us the materials, have lost in time. This article was written by a Japanese philosopher who sought to dispute the role of universities through a thought-provoking issue he presented. This issue was about how knowledge in the modern age, and especially towards the future, is in a sense too fragmented and poses an issue in regards to how we are to educate ourselves in the future.

The article mentioned through a metaphorical image, how all human knowledge in all fields can be laid out in the shape of a tree. Firstly, the main fields such as math, chemistry and physics branches themselves out from the trunk from the tree into so called scaffolds. These scaffolds form the tree's canopy and marks, in the metaphor, how the main fields form the basis of human knowledge. Next, protruding from the scaffolds, we have smaller areas, or sub-fields within each separate scaffold field. This lateral, as a branch from scaffolding is called, field could be, for example, algebra. That in turn will branch out into smaller and smaller laterals that symbolize further research and in-depth knowledge of specific fields.

Now why is this an issue? This tree of knowledge is continuously growing, the fields of today have always and will in the future expand into longer scaffolding and further laterals. This poses a problem for students as the universities, and even pre-university education, are educating from the base of the tree outwards into the branches. This is in the same way the tree only grows through absorbing the nutrients of the surrounding through its roots, that are then transported up the trunk and out into the scaffold and laterals that continue to grow. And as the tree grows larger every year through advancements in research, the challenge becomes that you have to teach more, and in a sense faster, in the same teaching period as previous year so that students can continue to research and further build the tree, from the inside or branching out. This has forced academia to either push students harder in learning more, or to entirely skip specific areas and avoid



Branch structure of trees

Source: <https://waynesboronurseries.com/pruning-deciduous-trees/>

longer in-depth thinking around specific topics to allow faster progress in learning outwards along the branches.

So what is universities, and all other parts of education, role in all of this? One of the arguments made in the article was that since teaching from the trunk outwards takes longer and longer, we should be rethinking how the education system works, and in reconsidering the roles of all steps of education and what they should be teaching. High-school education teaches mainly the trunk and at the start of scaffolding, and in some high school institutions, also towards more lateral branches. As this scaffolding, and the trunk itself, are increasing in size, there has come a need, as according to the article, for universities to consider acting as an extension of the trunk and scaffold teaching done in high school education. Now you might think that is already what universities do – depending on what kind of education you would choose – and you would be right. However, the argument still stands that while if, you for example, choose a specific field, you will be, hopefully, learning more scaffolding level knowledge before you head out into the laterals, you will always be pushed to learn more in the same amount of time as previous generations in order to know enough of the scaffolding and laterals to be able to contribute yourself with new laterals to build the tree. The issue is arguably that you will in the future be having an issue contributing to the tree. As by the time you are doing your bachelor, or master's research and further research, you will be not far along in the knowledge race to be able to contribute. You will instead have to, early on in

(Continues on the next page)

## The Role of Universities and the Tree of Knowledge

Viktor Granström, Office Assistant, JSPS Stockholm Office

your education, specify in a specific field, or scaffold, and chase towards the leading laterals to contribute with your research. This is essentially what universities already do; they offer you the choice to hone in on a specific field and continue along that path, for example, humanities. However, while this does make you able to contribute in your research, the arguably lacking education across the fields is creating a lack of general knowledge, which in turn leads to an increasing difficulty in interdisciplinary research and discussion. The article argued for the importance of a higher proficiency across all scaffolding level fields among the general population, there is, for example, true value in knowing major ideas and continued development of philosophy and humanities knowledge as it is helpful not only as a way to allow you to formulate your thoughts and to support more interdisciplinary research methods, but also as a personal tool to help individuals as they head out into society.

That was one of the main arguments of the article that universities should provide more common spread of knowledge across all scaffolding level fields to all students, essential acting as an extension to high school education that then allows students to focus on specific fields as they acquire the necessary level of base knowledge. Now as you might think, this arguably only serves to create more difficulty in educating students as in this solution you would be continually studying broadly for your first years in university, as a part of forced extension of high school education, and only at the later years and continued research as a master and beyond, would you be able to start focusing more in-depth along a specific field, or lateral.

This is where the question regarding what the role of universities is, comes in. What type of education is more suitable? Is there an ultimate path and solution to this issue? Should universities teach broadly, or stay along current education policies and allow students to choose for

themselves what field to focus on? The answer is difficult to find. The solution to the metaphor might already be presented in the real world; universities have their own ideas on how they teach, especially privately based ones. In Japan, I often saw the slogans of universities that they were promoting their education in ways such as “skills to help you succeed in society” or “become the front-liner researcher in the field”. Universities today are arguably already adapting; by becoming institutions that promote different approaches to the problem mentioned in this article. This is assuming the problem mentioned in this article is indeed true.

The metaphor in itself is arguably a flaw against itself. A tree does not grow taller or its branches longer as it ages in later parts of its life, and it instead bulks up like a bodybuilder. As such the argument that fields become more difficult to progress along as they will indefinitely get longer could be conceivably flawed. Perhaps human knowledge will eventually settle, as an old tree does, and instead expand upon itself through new layers of bark in the trunk, and to continue sprouting new ideas in the form of leaves that ultimately die but continue to leave room for more leaves. The nutrients from the earth travelling up the tree is what symbolizes as new students educating themselves. The end-goal of the nutrient is to head out into the tree and towards the leaves where the photosynthesis process provides the tree with the fuel, and in our metaphorical case you call it providing research at the very front-line of the specific fields, that builds the human knowledge tree up in the form of new layers of bark that strengthens it; growing larger. While the metaphor might have its flaws, I believe there is an important thought experiment to be had, which was the original idea with the choice of article and the class I was participating in, with the idea and the underlying problem – even if it actually exists or not – as thinking and discussing is something we are fundamentally responsible to do as to make the tree grow.



Stockholm Public Library

Source: <https://pixabay.com/en/books-students-library-university-1281581/>

### The JSPS Alumni Club in Finland

In this section we have a message from **Dr. Ville Syrjälä**, Chair of the Alumni Club in Finland (ACF). He will talk about the ACF and its activities.

#### Overview of ACF

- **Establishment:** 2009
- **Number of Members:** 100
- **Chair:** Ville Syrjälä, Tampere University of Technology, Department of Electronics and Communications Engineering
- **Main Activities:** Activity Seminar, All Alumni Meeting, Board Meeting, General Assembly
- **Rules and Regulations:** Stipulated in the Articles of the Club



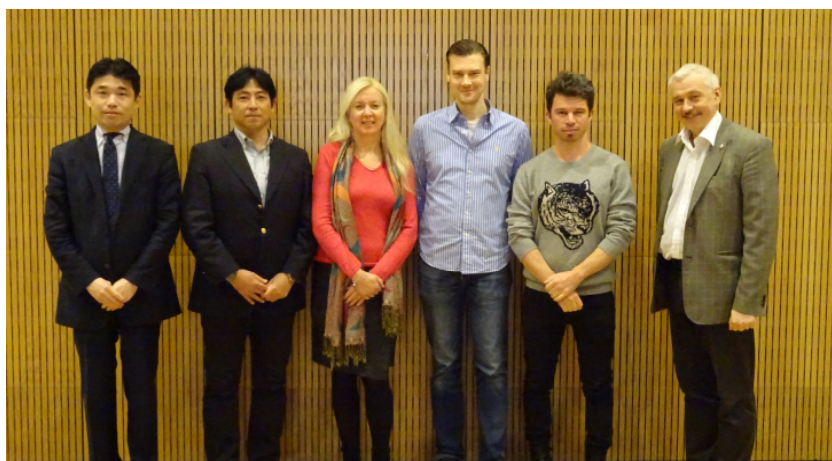
Dr. Ville Syrjälä

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

A: Currently, among other activities, I'm a postdoctoral researcher at Tampere University of Technology with research focus on 5th generation mobile networks, especially on the physical layer issues on radio device signal processing. In 2013 and 2014, I was a JSPS postdoctoral fellow in Kyoto University. At that time my research focus was on so-called "in-band full duplex radio technology." As a Finn, the cultural shock for me in Japan was relatively mild, and I soon found myself enjoying my time in the peaceful and extremely beautiful Kyoto. The visit has been one of the best experiences in my life, and it offered very special experiences, e.g., visit to Kinosaki and nightly runs in Kyoto along Kamogawa River. I miss those times. During my stay, the JSPS Head Office advertised the alumni club, and I joined the club right after returning to Finland. I hope to be able to handle the tasks as the alumni club chair and to see many people at our events.

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

A: The club started its activities in 2007, and was officially established in 2009. We currently have around 100 members. We have Board Meetings and General Assemblies several times per year. We arrange annual Activity Seminar and All Alumni Meeting, as our main activities. We have members from all disciplines, so the topic of the yearly Activity Seminar changes year by year. This year we had an Activity Seminar about material and bioscience. Even though I didn't have any background on the topic, I was very pleased that I participated in the seminar as it was very interesting.



ACF Board Members and JSPS staff



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

A: There are three categories of membership: regular member, associate member and honorary member. To become a regular member, you should have participated in a JSPS program. This also includes the JSPS programs coordinated by the Academy of Finland. People who are interested to help the club to achieve its goals in strengthening the scientific exchange between Finland and Japan are able to join the Alumni Club as an associate member. To actually join the club, please visit the JSPS Stockholm Office webpage, and fill the applications form at <https://www.jsps-sto.com/alumni-club/application-for-membership/>. Your application is handled at the next Alumni Club Board Meeting.

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

A: In FY2017, we held the All Alumni Meeting titled "Celebrations" where we celebrated the 10-year anniversary of starting of its activities of the Alumni Club. It had speakers from various areas of science and also presentations about Finnish and Japanese culture and languages. FY2018 has already started and we had a very interesting Activity Seminar about biomaterials. The speakers were Prof. Gasik and Prof. Igarashi from our Alumni Club. We are planning an All Alumni Meeting for February 2019. I hope we are able to make another successful event.

I would like to make a special note for FY2019. As the Alumni Club was established in 2009, we are having the 10-year anniversary of the club in 2019. We aim to make a special event for that, and hope for many participants. The year 2019 is also a year for 100-year of diplomatic relations between Finland and Japan, so it is a special year for us as well.

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

A: For all readers who are eligible for regular membership, we would like new active members. We have enough members on the board, but we would more than welcome new enthusiastic people on the board to help arrange the operational activities of the club. We are more than happy if you could join us as an associate member as well. We warmly welcome also non-members to join our events.

We are planning to hold the All Alumni Meeting, which is another seminar organized by our Alumni Club, early next year. Please visit the JSPS Stockholm Office website to stay updated for the date and venue of the event. I am looking forward to meeting you soon at future events!



Dr. Syrjälä, ACF Chair, during the participation at ACF Activity Seminar FY2018



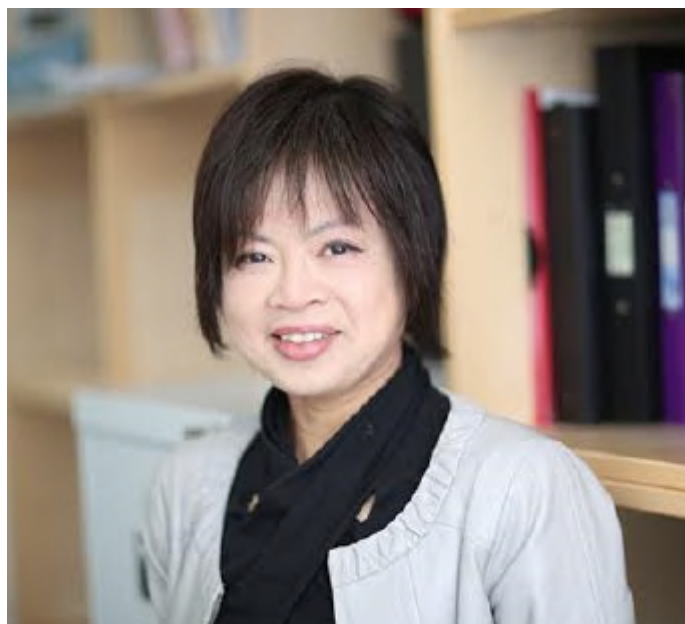
Prof. Gasik, ACF Vice-Chair, during the lecture at ACF Activity Seminar FY2018

In this section we ask Japanese researchers to present their experience and research in their respective country. For this issue we asked Dr. Kyoko Murakami, a researcher at the University of Copenhagen (KU) to present her research and experiences in Denmark.

## Dr. Kyoko Murakami

**Title/Position:** PhD / Associate Professor in Psychology

**Affiliation:** KU



| Years   | Degree | Institute  | Location                     |
|---------|--------|--|------------------------------|
| 2001.12 | Ph.D.  | Department of Human Sciences, Loughborough University    | Loughborough, UK             |
| 1995.05 | M.S.   | Department of Education, North Carolina State University | Raleigh, North Carolina, USA |
| 1990.05 | B.A.   | Speech Communication, North Carolina State University    | Raleigh, North Carolina, USA |
| 1983.03 | B.A.   | Kobe College   | Nishinomiya, Hyogo, Japan    |

| Years             | Position            | Institute  | Location            |
|-------------------|---------------------|--|---------------------|
| 2014.12 - present | Associate Professor | Department of Psychology, KU                     | Copenhagen, Denmark |
| 2014.11 - 2017.09 | Lecturer            | Department of Education, University of Bath      | Bath, UK            |
| 2007.05 - 2017.08 | Lecturer            | School of Sport and Education, Brunel University | Uxbridge, UK        |
| 2002.06           | Research Lecturer   | Department of Education, Brunel University       | Uxbridge, UK        |

## Q: What are you currently researching in Denmark?

A: I have been undertaking my research on collective remembering, especially reconciliation and commemorative practices with specific focus on the socio-material nature of memory objects and symbols used for sense-making practices such as national commemoration of wars and conflicts, international reconciliation and pilgrimages of war veterans. In parallel with it, I have worked on discourse analysis on learning of the elderly and dialogic pedagogy. My research contributes to the critical psychological movement, which focuses on cultural formation of mind and social interaction dimensions in psychological theory building as an alternative to those of experimental cognitive psychology. I use social and cultural psychology and discursive psychology to rework on the dualism of mind and matter, not mind over matter, and challenge the methodological individualism.



A must-see: Tivoli Gardens lit up for Christmas

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

A: I became interested in collective memory and silence of war and conflicts as a MA student in the USA and began my PhD research on that very subject in 1998. I was fortunate to be part of the pioneering group called “Discourse and Rhetoric Group”, consisting of researchers in discursive psychology based at Loughborough University in the UK. I examined a specific case of Anglo-Japanese reconciliation practices of British veterans using discourse analysis.

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

A: Nordic Psychology, including Danish Psychology of critical kind, has been widely known amongst social and cultural psychologists as well as discursive psychologists in the English speaking academia. I came across this kind of psychology as a MA student and started reading research in cultural psychology. In my PhD and post-PhD period in the UK, I had the privilege to meet and work with those prominent Nordic psychologists in conferences and research seminars. In 2014, I saw a job advert from the KU Psychology Department and became interested in working with them to deepen my research, so I applied and here I am; the rest is history.

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

A: For me, research is about asking new questions and constructing arguments through robust analysis. It is important, therefore, to choose research agenda and ask research questions that matter to me. I say the same to my students. In order to be able to explore my own research agenda, it is essential to situate myself in a critical mass and create a research environment where I can work with open-minded and free thinkers. I believe that research is a very creative process, just like an artist creates new artwork. So, research is, for me, not merely a job. It is a privilege and often presents enormous challenges. To be able to overcome these, one has to have a passion in the research and be able to persevere and be resilient when things do not go as expected.

## Q: What is your impression of the research environment at KU?

A: Within the KU Psychology Department and the Faculty of Social Sciences, researchers including PhD students are well endowed financially, much better than those in British universities. Since Danish universities are on a smaller scale and have less domestic competition, they seem to be able to put interesting ideas into research projects much faster. The Department works like a family, so if you are in a research group with a good track record, it is a very good place to be.

The Danish researchers are keen to work with overseas researchers for international networking and research collaboration.



Cherry blossoms in full bloom in a courtyard of City Campus, KU

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

A: Many Japanese researchers might think that Danish research culture is open, modern and very progressive. In reality, however, the barrier of Danish language culture and language can be hard to break through. So, it is good to keep in mind to be patient and to work on developing a trustful research relationship with Danish colleagues who have overseas research experience.

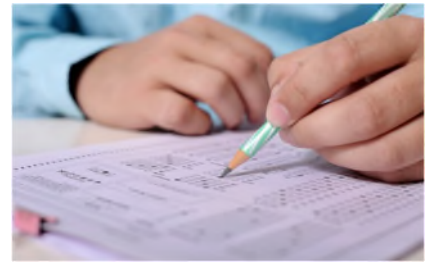




## **New Rules Regarding Admission to Universities to be Introduced**

The Swedish Government now provides Swedish Council for Higher Education (UHR) with several missions to the new provisions to be implemented. This is to make sure the individual's expertise will play a greater role in the new admission rules to UHR. On July 5, the government presented six new concrete admission rules to the college. The new rules have a focus on competence and the individual skills to be able to take on and complete a college education. In addition, the government also decided to experiment with a national eligibility test for those who do not meet basic competence through education, with the aim to create more pathways to high school.

Helene Hellmark Knutsson, Minister for Higher Education and Research, comments on the new rules: "Skills will be valued and taken advantage of – even experience from working life. It is necessary if we are to meet the digitalization, the changing world of work and the major skills needs."



F1Digitals (<https://pixabay.com>)

Source: <https://www.regeringen.se/pressmeddelanden/2018/08/sa-ska-de-nya-antagningsreglerna-bli-verklighet/>



## **International Students are Key to Plugging STEM Gap**

The Philanthropy Forum report, Study Destination Sweden: Private capital for increased competence building and competitive strengthening, written by Martin Wikstrøm and Johan Eklund, argues that the STEM – science, technology, engineering and mathematics – gap is now reaching "historic proportion"; that even through the number of students graduating has increased from 33,000 in 1996 to 77,000 in 2015, there is still a large demand, for example, for engineers and IT candidates in the workforce. Furthermore, in 2015 around 31,000 students were admitted to STEM education in Sweden, which corresponds to 29%. In Germany, however, that figure was 39%.

To solve this the report suggests that, since a higher proportion of international students to Sweden are selecting STEM subjects, recruiting and retaining such international students could be a key strategy to bridge the gap between the demand for candidates and the supply presently provided by Swedish universities. There are, however, difficulties in promoting increased international recruitment, including the housing shortage present especially in Stockholm. Wikstrøm and Eklund argue that even if this trend of increasing international students goes up, there is a need for Sweden to attract and retain more of them, especially to help plug the STEM gap.

Source: <http://www.universityworldnews.com/article.php?story=20180921090443200>



Moreharmony (<https://pixabay.com>)



## Japan Sees Surge in International Nursing Care Students amid Labor Shortage

According to a survey by the Japan Association of Training Institutions for Certified Care Workers, as of this academic year Japan has seen a doubling in numbers of students from other countries enrolling in nursing care schools. A total of 1,142 international students enrolled in nursing care programs in April, up from 591 as reported a year earlier. This rise in number presented itself from 2015, and gained further momentum following a legal amendment September of 2017, making it easier to obtain residential status for certified caregivers.

With an expected shortage of 340,000 caregivers in 2025, the Japanese Government is aiming to expand its scope of acceptance of international workers in the sector. But while the increasing number shows a positive trend, there are ambiguities whether Japan will be able to continue to see this increase. Other countries such as Germany, Britain, the United States and Singapore are also looking for workers from other countries in the same sector. In addition, the average monthly wage in the caregiving sector is about 100,000 yen less than in other industries. "Japan needs to provide a more attractive work environment such as raising wages and support for childrearing to keep attracting international caregivers" said Miku Ishibashi of the Daiwa Institute of Research.



DarkStojanovic (<https://pixabay.com/>)

Source: <https://mainichi.jp/english/articles/20180917/p2g/00m/0fp/070000c>



## Largest Evaluation of the Social Sciences Published in Norway



JuralMin (<https://pixabay.com/>)

An evaluation of the social sciences in Norway was published on June 19 by the Research Council of Norway, involving 48 panel members who mainly are present in other Nordic countries but also other European nations. The evaluation covered six research areas: geography, economics, political science, sociology, social anthropology and the economic-administrative research area. Its research scope included 3,005 social scientists and 42 institutions – 26 faculties or departments at universities and university colleges, and 16 publicly financed social science research institutes. And within those institutions the evaluation was also comprised of 136 research groups.

The evaluators, chaired by Professor Katarina Eckerberg from the Department of Political Science at Umeå University, Sweden, and 48 other panel members, used a give-grade scale, where the top position was characterised as: "Original research at the international forefront. The unit has a very high productivity. The unit (the institution or research group) undertakes excellent, original research and publishes it in outstanding international channels for scientific and scholarly publications. Its researchers present ongoing research regularly at recognised, international scientific conferences."

With the University of Oslo in the lead, five Norwegian institutions achieved top grades in some subjects. Four top grades were achieved at the university across three subjects: economics, sociology and social anthropology, and two faculties receiving top grade in sociology – its faculties of law and social studies.

22 research groups were also awarded a top score with seven of them being at Oslo University, five at the Norwegian School of Economics (NHH), three at the University of Bergen and three at the BI Norwegian Business School.

In addition, one top score each was achieved by research groups from the Peace Research Institute Oslo (PRIO), the Center for International Climate Research (CICERO), the Norwegian University of Life Sciences (NMBU), and the Norwegian Institute of International Affairs (NUPI).

Source: <https://www.sciencemag.org/news/2018/09/japans-science-ministry-seeks-large-budget-increase-prioritizing-massive-neutrino>



## Japan's Science Ministry Seeks Large Budget Increase

Among governmental fiscal challenges, Japan's main Science Ministry appears hopeful that the nation is ready to once again back basic research in a big way. MEXT, on August 31, announced an ambitious budget request for FY2019 that would allow Japan to compete for the world's fastest supercomputer, build a replacement x-ray space observatory, and push ahead with a massive new particle detector.

Based on the proposal from MEXT, the funding for research grants to academic groups and individuals would rise 8% to 247 billion yen, while the general proposal represents a 21% increase for its FY2019 budget, to 1.17 trillion yen (\$10.54 billion). Reflecting pressure to make university research payoff economically, the budget includes 2.4 billion yen to support turning academic biomedical findings into marketable pharmaceuticals.

Seeking to boost support for space-related R&D, MEXT will increase the funding by 28% to 199 billion yen. This is to cover the cost of new rocket and aircraft development but also to include 3.9 billion yen in support for work on the X-Ray Imaging and Spectroscopy Mission that partly replaces the ASTRO-H satellite that broke apart in space shortly after its February 2016 launch.

"The coming year is critical for our project," says Masato Shiozawa, a neutrino physicist at the University of Tokyo's Institute for Cosmic Ray Research, which is leading another space relate project: Hyper-Kamiokande detector, a giant water-filled tank lined with sensors that would pick up the flashes generated when neutrinos collide with electrons or nuclei of water molecules. He explains that if all goes well with the feasibility study, Hyper-Kamiokande could get construction funding starting in 2020. Japan is expected to shoulder \$700 million of the construction cost, with another \$100 million coming from the international partners, Shiozawa says. Hyper-Kamiokande could begin operations as soon as 2027.

The budget is to be finalized and submitted to the legislature in time to take effect with the start of the fiscal year in April, 2019.

Source: <https://www.sciencemag.org/news/2018/09/japans-science-ministry-seeks-large-budget-increase-prioritizing-massive-neutrino>



Tumisu (<https://pixabay.com/>)





## **Brexit Poses Risks for Danish Higher Education and Research**

A lack of focus on higher education regarding the Brexit negotiations has led to concern among Danish universities. They argue that they are not prepared for, so called, “hard Brexit” and fear this will have severe implications for Danish higher education and research. The universities also fear that the UK will leave Erasmus+, which is the European Union’s funding scheme to support activities in the field of education, training, youth and sport. As a result of committing to Brexit; this in turn will also mean a significant intellectual loss for Danish research institutions.



Elionasz (<https://pixabay.com/>)

A report, released in June 2018, by Danish think tanks DEA and EUROPA, commissioned by the Danish Agency for Science and Higher Education under the Higher Education Ministry, provides an analysis of the impact that Brexit will have on Danish research and higher education, and that solutions there will be for continued collaboration with UK institutions moving forward. UK institutions are one of the main collaborative partners for Danish institutions in the past, mainly as part of the Erasmus+ programme. The report states: “With more than 3,000 Danish students at UK higher education institutions in 2014 – and an unknown – but large number of Danish researchers that are collaborating with or employed by UK research institutions, even a small change in the regulations for moving to the UK will create problems for Danish students, teachers and researchers.”

Among the 39 respondents in the report, there has been a general consensus that it would be an advantage to have a stable, binding and involving agreement on research and higher education with the UK. Professor Jens Oddershede, Department of Physics, Chemistry and Pharmacy at the University of Southern Denmark, told University World News, arguing towards the loss in higher education shall UK commit to Brexit: “No one country is large enough to drive this development on its own. I sincerely hope that this issue will be at the core of the discussions that are currently taking place between responsible parties both in London and Brussels.”

Source: <http://www.universityworldnews.com/article.php?story=20180707105704773>



## **Strategic Research Council Submits 2019 Proposal with Strategic Research Themes to Government**

The Strategic Research Council (SRC), established within the Academy of Finland, proposes that the Finnish Government adopt four new strategic research themes for 2019. Among the themes proposals, the SRC highlights systemic and cross-disciplinary approaches as key success factors for continued strategic research. Together with the themes of previous years, the new proposal for 2019 provides a comprehensive basis for the information needs of the present and future decision-making. The four strategic research themes for 2019 are as follows:



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- Towards a sustainable, healthy and climate-neutral food system
- Innovative materials and services to promote resource wisdom and sustainable development
- The evolving role of public authority and the potential for steering society
- Culture in an increasingly technologically driven society

SRC Chair Per Mickwitz said: “There’s a strong complementarity between the 2019 theme proposals and the SRC’s current programmes. Their shared goal is to create a knowledge base that will enable society to develop in favorable and sustainable ways in this rapidly evolving world. At present, we use a lot of materials that cause major problems, and our current food system is not durable. We need to change course – the food system should become part of the climate change solution and new materials should be harnessed to produce better prosperity without significant environmental damage. The SRC’s theme proposals suggest the strengthening of the research base for such reorientation.”

Mickwitz furthermore states that the rapid changes in technology are challenging for the practices of both people and organizations. There is a need for greater understanding of the interaction between technology and culture. The SRC is now proposing the strengthening of the ethical dimension in research as the intersecting priority of the 2019 proposal.

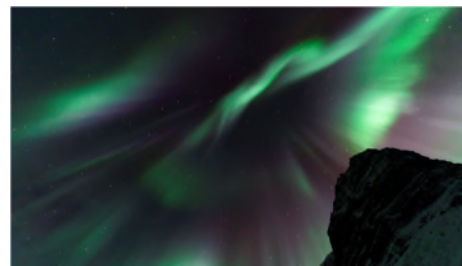
Source: <http://www.aka.fi/en/about-us/media/press-releases/2018/strategic-research-council-submits-proposal-on-2019-strategic-research-themes-to-government/>



## **Iceland and Japan Seeks to Enhance the Cooperation in the Fields of Education and Science**

On August 8, Lilja Dögg Alfreðsdóttir; Minister of Education, Science and Culture, Iceland, and Toshiei Mizuochi; State Minister of MEXT of Japan, had a meeting in Reykjavik. At their meeting, the ministers discussed among other things the importance of the exchange of university courses and good cultural relations, equality issues and the possibility of establishing a formal partnership agreement in the fields of science and technology. In effect, there are 34 partnership agreements between Icelandic and Japanese universities while Icelandic and Japanese scientists have collectively published about 300 scientific articles, including in the fields of genetics, geology, mathematics, computer science, astronomy and physics.

“The Japanese have expressed the great interest that we co-manage our cooperation in the fields of scientific and technical matters, particularly in terms of the issues of northern development and there are truly many exciting councils. The Icelandic authorities have a good partnership with the Japanese on a number of issues, for example at the Nordic Council level where Iceland will accept the presidency next spring. Within the five years at the Council, there is a desire to strengthen and deepen the cooperation and participation of the focus groups,” said Minister Alfreðsdóttir at the meeting.



Pexels (<https://pixabay.com/>)

Source: <https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/2018/08/08/Aukid-samstarf-Islands-og-Japan-a-svidi-mennta-og-visindamala/>



## **New Opportunities for Strengthening Research of the 3 Baltic States**

The Research Council of Lithuania is preparing for the start of the Baltic Research Program execution. The co-research of the three Baltic States and the giver nations – Iceland, Lichtenstein and Norway – must be directed until 2024 with a financial plan of €23 million. The first application procedures for the programme will happen this autumn.

The Baltic Research Program is supported by the Iceland, Liechtenstein and Norway, utilizing budgetary component of these nations for 2014–2021. Under the memorandum of agreement, these assets represent 85% of the program spending plan, 15% is contributed by the state spending plans of Lithuania, Latvia and Estonia.

In 5–6 years, 30 research ventures relevant to the participating countries are to be conducted.

The program means to fortify the research potential of all the participating nations, which is why all the projects ought to include whatever number of partners from different program nations as could reasonably be expected. An event in Tallinn will be held for the scientists who are setting up their applications to have the opportunity to discover Baltic research program partners.



Pexels (<https://pixabay.com/>)

Source: <https://www.lmt.lt/en/news/research-council-of-lithuania-new-opportunities-for-strengthening-research-of-the-3-baltic-states/2918>

## Program Information

### **Bilateral Programs**

This project aims to create a sustainable network of bilateral research teams that have developed individual researcher exchanges, and aims to establish a sustainable network of bilateral research teams with excellent researchers (including young researchers) from universities in Japan and researchers from other countries. We will support expenses required for collaborative joint research and seminar implementation.

<http://www.jsps.go.jp/j-bilat/seminal/jrss.html> (Japanese)

<http://www.jsps.go.jp/english/e-bilat/index.html> (English)

### **Core-to-Core Program**

This project establishes a sustainable cooperative relationship that links research institutions in Japan and countries around the world on research topics that are recognized as leading and internationally important in Japan or research tasks that contribute to solving various problems in the region. We aim to train young researchers who will be the core of the next generation as well as establishing core research and exchange bases in the world level or region in this field.

<https://www.jsps.go.jp/j-c2c/index.html> (Japanese)

<https://www.jsps.go.jp/english/e-c2c/index.html> (English)

### **Invitational Fellowships for Research in Japan**

This project invites outstanding researchers from other countries and provides opportunities for joint researchers, discussion and exchange of opinions with researchers in Japan, thereby supporting the progress of international research. This is a project aimed at promoting academic research in Japan and advancing internationalization through research cooperation with international researchers.

Application guidelines for FY2019 are being published on the JSPS homepage.

<http://www.jsps.go.jp/j-inv/index.html> (Japanese)

<http://www.jsps.go.jp/english/e-inv/index.html> (English)

### **JSPS Postdoctoral Fellowship for Research in Japan (Standard) [Swedish Authority's Nomination]**

**Duration of Fellowships:** 12 to 24 months

**Application Deadline:** January 31, 2019

For further information, including relevant documents, please refer to here:

<https://www.jsps-sto.com/event/postdoctoral-fellowship-for-research-in-japan-standard-2019/>

### **JSPS Postdoctoral Fellowship for Research in Japan (Short-term) [Swedish Authority's Nomination]**

**Duration of Fellowships:** 1 to 12 months

**Application Deadline:** January 31, 2019

For further information, including relevant documents, please refer to here:

<https://www.jsps-sto.com/event/postdoctoral-fellowship-for-research-in-japan-short-term-2019/>



## Upcoming Seminars and Symposia

### **KVA-JSPS Seminar**

**Date and time:** November 26, 2018, 13:00-18:00

**Venue:** The Royal Swedish Academy of Sciences (KVA)

**Speakers:** Prof. Takaaki Kajita, the University of Tokyo, 2015 Nobel Laureate in Physics;  
Prof. Hitoshi Murayama, the University of Tokyo, UC Berkeley

**Organizers:** The Royal Swedish Academy of Sciences (KVA), the Embassy of Japan in Sweden and the JSPS Stockholm Office

**URL:** <http://www.jsps-sto.com/event/kva-jsps-seminar/>



### **Sweden-Japan Academic Network**

**Date and time:** February 1, 2019

**Venue:** The Royal Swedish Academy of Sciences (KVA)

**Organizers:** The Royal Swedish Academy of Sciences (KVA), the Embassy of Japan in Sweden and the JSPS Stockholm Office

### **Norway-Japan Academic Network**

**Date and time:** February 6, 2019

**Venue:** Research Council of Norway (RCN)

**Organizers:** Research Council of Norway (RCN) and the JSPS Stockholm Office

### **Japan Alumni and Researcher Assembly (JARA)**

**Date and time:** March 15, 2019

**Venue:** Technical University of Denmark (DTU)

**Organizers:** JSPS Alumni Club in Denmark (ACD), the Embassy of Japan in Denmark, Tokai University European Center and the JSPS Stockholm Office

### **All Alumni Meeting in Finland**

**Date and time:** TBA

**Venue:** TBA

**Organizers:** JSPS Alumni Club in Finland (ACF), Hokkaido University Europe Office in Helsinki and the JSPS Stockholm Office

### **Nobel Prize Dialogue Tokyo 2019**

**Date and time:** March 17, 2019

**Venue:** Pacifico Yokohama Conference Center, Japan

**Organizers:** JSPS, Nobel Media

**Theme:** "The Age to Come" (tentative)

**URL:** [http://www.jsps.go.jp/j-nobel\\_prize\\_dialogue/index.html](http://www.jsps.go.jp/j-nobel_prize_dialogue/index.html)

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

The EU General Data Protection Regulation (GDPR), was 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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