JSPS QUARTERLY

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

FEATURE

2018 International Prize for Biology
Presentation Ceremony

No. 66-67 2019

Presentation Ceremony Held for 2018 International Prize for Biology

On 19 November 2018, the 34th ceremony for awarding the International Prize for Biology was held in the presence of Their Majesties the Emperor and Empress at The Japan Academy in Tokyo. The ceremony was organized by the Committee on the International Prize for Biology, chaired by Dr. Hiroo Imura, Vice President, The Japan Academy.

At the ceremony, an opening message was delivered by Dr. Imura and a report on the selection process was provided by Dr. Kiyokazu Agata, chair of this year's selection committee, after which the prize and an Imperial Gift were presented to this year's awardee, Dr. Andrew Herbert Knoll, Fisher Professor of Natural History, Harvard University. After congratulatory remarks by Prime Minister Shinzo Abe (read by Mr. Akira Sato, State Minister of Cabinet Office) and by Minister Masahiko Shibayama, Ministry of Education, Culture, Sports and Technology, the ceremony concluded with an acceptance address from Dr. Knoll.


The presentation ceremony


Dr. Knoll, holding Imperial Gift with his spouse

To commemorate the award to Dr. Knoll, a symposium was held on 21 and 22 November in Nagoya, co-organized by Nagoya University and JSPS.

International Policy Planning Division

Excerpt from Acceptance Address by Dr. Andrew Herbert Knoll

I feel both exhilarated and humbled to stand before you today. Exhilarated by the thought that colleagues would even nominate me for such a remarkable honor. And humbled to have been singled out among the community of talented scientists who work day by day to reconstruct life's immense history.

I am grateful to your Majesties, the Emperor and Empress, for gracing this ceremony and for your steadfast support of fundamental biology. It is wonderful that the Imperial Household not only supports biology but participates actively in the quest to understand nature, beginning with the Emperor Showa's years of research on marine biology and continuing with his Majesty's current investigations of gobiid fishes. I also thank the Japan Society for the Promotion of Science for its powerful support of biological research and education.

Scientists who arrive at the extraordinary place where I find myself today generally stand at the confluence of two intellectual streams. First, there is the stream that flowed to us from our own teachers. My mentors included Elso Barghoorn, pioneer in the paleontological search for Earth's earliest life; Dick Holland, a towering geochemist who set the stage for research on Earth's environmental history; and Stephen Jay Gould, who fueled my interest in evolution. The other stream connects us with the students and postdocs who have worked in our laboratories – a steady stream of ideas and insights that most definitely runs in two directions. Knoll lab alumni are a superb group of scientists who are taking studies of paleontology, geobiology, and Earth history in new directions, and I am grateful for and proud of them all.

I have also benefitted tremendously from colleagues with whom I have partnered in research. There are many, but here I mention John Hayes, who taught me everything I know about biogeochemistry; Keene Swett and Brian Harland who introduced me to Arctic research; John Grotzinger, partner for the past twenty-five years in fieldwork that has ranged from Namibia and Siberia to, virtually at least, Mars; and Dick Bambach, who has long challenged me to strike out in fresh directions. Lastly, I gratefully acknowledge the love and support of my wife Marsha and my children, Kirsten and Rob. Without them, I wouldn't be here today.

The fundamental biology celebrated by the International Prize addresses a grand question: how did the world around us come to be? In part that is a question of process, and so the Prize rightfully acknowledges research in ecology, development, and genetics. But it is also a question of history, and I deeply appreciate that paleontology stands among the disciplines recognized by this unique award. Without paleontology, we would have no idea that dinosaurs even existed, much less that they lived with mammals unlike any we see today in forests of

extinct plants, or that dinosaurs and myriad other species disappeared during a global catastrophe 66 million years ago.

My vision for paleontology is one in which the fossils we discover are interpreted within a framework of Earth's dynamic environmental history. Indeed, life is a planetary phenomenon, born of planetary processes, sustained by planetary processes, and through time emerging as a set of planetary processes important in its own right. The profound and ever-changing interactions between life and environment have shaped both evolution and physical Earth, and investigating this grand interplay helps us to understand both where we came from and where we may be headed in the face of 21st century global change.

Thank you again for this exceptional honor.

Call for Nominations for the 2019 International Prize for Biology

The Committee has chosen the "Biology of Insects" as the specialization for the 2019 Prize. When making a nomination, fill in the nomination form and attach a brief statement of the nominee's achievements and submit the form by 19 April 2019. For more details and the nomination form, please visit our website: http://www.jsps.go.jp/english/e-biol

Symposium Commemorating the Centenary of KAKENHI

This year marks the 100th anniversary of the establishment of what was the predecessor to the current Grants-in Aid for Scientific Research (KAKENHI) system. The "KAKENHI Centenary Symposium" was held at the Yasuda Auditorium of the Hongo Campus of The University of Tokyo, on 5 November 2018, to commemorate this milestone.

The symposium commenced with opening remarks from the Honorable Mr. Takaki Shirasuka, Parliamentary Vice-Minister of Education, Culture, Sports, Science and Technology of Japan (MEXT) and Dr. Susumu Satomi, President of JSPS. Next, Mr. Masashi Kajiyama, Director, Scientific Research Aid Division, Research Promotion Bureau, MEXT gave a report on the current situation regarding the KAKENHI system and Dr. Yasuhiro Iye, Executive Director, JSPS gave the keynote speech titled "100 Years of KAKENHI and the Future."

Next, the commemorative lectures were delivered by two Nobel Laureates Dr. Takaaki Kajita, Director, Institute for Cosmic Ray Research, The University of Tokyo and Dr. Yoshinori Ohsumi, Honary Professor, Tokyo Institute of Technology. Dr. Kajita spoke of the major role KAKENHI played in the important research findings of the experiments at the Kamiokande and of the significance of KAKENHI in enabling research based on innovative ideas to take

Dr. Takaaki Kajita, Director, Institute for Cosmic Ray Research, The University of Tokyo

Dr. Yoshinori Ohsumi, Honary Professor, Tokyo Institute of Technology

place. Dr. Ohsumi said that almost all of his 40 years of research life had been supported by KAKENHI and that it is important to develop a greater consciousness of, not only the government, but the whole of society supporting science.

Finally, Professor Chieko Kai of The University of Tokyo moderated a panel discussion between Professor Emeritus Michio Muramatsu, Kyoto University, Professor Emeritus Akira Fujishima, Tokyo University of Science, Dr. Shigetada Nakanishi, Director, Bioorganic Research Institute, Suntory Foundation for Life Sciences, and Professor Kazuo Miyajima, Kanazawa Institute of Technology, who took the stage to discuss the importance of basic research and how academic assistance should operate from a far-sighted perspective under the theme of "Looking back on the history of academia and KAKENHI in Japan."

More than 500 people attended the symposium, including researchers and people in administrative roles at research organizations including universities, which provided an opportunity to look back a century of development of KAKENHI as well as to reiterate in everyone's minds the vital importance of academic research and the role KAKENHI plays in supporting that.

Research Aid Planning Division

Two New WPI Centers Selected

The World Premier International Research Center Initiative (WPI Program) was established in 2007 by MEXT as an initiative aiming to build "globally visible" research centers in Japan that are unrestricted by research fields or borders, and that overcome language and institutional barriers. As with the previous year, two new WPI centers were selected in 2018 after undergoing rigorous review. The new WPI centers are the Institute for Chemical Reaction Design and Discovery (ICReDD) at Hokkaido University, and the Institute for the Advanced Study of Human Biology (ASHBi) at Kyoto University. They have started activities to shape themselves into globally visible research centers that boast highly international research environments and world-class research standards. The two centers describe their WPI research projects as follows.

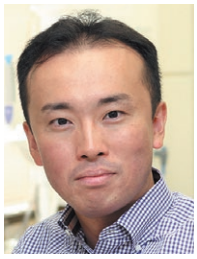
Institute for Chemical Reaction Design and Discovery (ICReDD)

Reaction development that relies solely on the trial-and-error approach is too time-consuming to solve current global problems that include pollution as well as the scarcity of energy and resources. CReDD will revolutionize the traditional approach to developing reactions by fusing computational, information, and experimental sciences. We strive to spread the benefits of this approach by establishing a global WPI and integrating other disciplines. Our sincere hope is that our WPI may contribute to a brighter and more prosperous future for all of humanity.

Satoshi Maeda,
Director of ICReDD

Institute for the Advanced Study of Human Biology (ASHBi)

ASHBi primarily explores humans and non-human primates, elucidating the mechanistic basis of species differences — i.e., the diversity of life forms driven by evolution — with an aim to uncover the core principles of human beings and disease states. This takes place in our open and flexible international research environment, with full support for motivated, early-career investigators.



Mitinori Saitou,
Director of ASHBi

For further information on the WPI Program, please see the following site:
https://www.jsps.go.jp/english/e-toplevel/index.html

Office for World Premier Research Centers

WISE Program: Doctoral Program for World-leading Innovative & Smart Education

The WISE Program promotes initiatives that train human resources with doctorates who will serve as exceptional leaders in all sectors through universities' creation of 5-year doctoral programs that combine world-class education and research capabilities, and leverage their unique strengths and the results of their graduate-school reforms, while systematically coordinating with domestic and foreign universities, research institutes and private companies. Additionally, the WISE Program drives efforts to create high-quality centers for continuous human resource development and exchange, and the creation of collaborative research.

This initiative, inaugurated by MEXT in 2018, selected the following 15 proposals from among a total of 54 submitted by national, public and private universities during its first year.

University Cooperation Program Division

Funded programs

No.	Name of University	Program
1801	Hokkaido University	WISE Program for One Health Frontier Graduate School of Excellence
1802	Tohoku University	Advanced Graduate Program for Future Medicine and Health Care
1803	Tohoku University	WISE Program for AI Electronics
1804	University of Tsukuba	Ph.D. Program in Humanics
1805	The University of Tokyo	World-leading Innovative Graduate Study Program for Life Science and Technology
1806	Tokyo University of Agriculture and Technology	Excellent Leader Development for Super Smart Society by New Industry Creation and Diversity
1807	Tokyo Institute of Technology	Creating Sustainable Societies through [Material×Information] Multi-talented Human Resource Development
1808	Nagaoka University of Technology	Global Pro-Active Root Technology Program
1809	Nagoya University	Graduate Program of Transformative Chem-Bio Research
1810	Nagoya University	DII (Deployer-Innovator-Investigator) Collaborative Graduate Program for Accelerating Innovation in Future Electronics
1811	Kyoto University	Innovation of Advanced Photonic and Electronic Devices
1812	Osaka University	Transdisciplinary Program for Biomedical Entrepreneurship and Innovation
1813	Hiroshima University	The Frontier Development Program for Genome Editing
1814	Nagasaki University	Global Health Elite Programme for Building a Healthier World
1815	Waseda University	Graduate Program for Power Energy Professionals

A-HORCs Meeting and Northeastern Asian Symposium Held in Nagoya

On 19 and 20 September, the 16th meeting of the Heads of Research Councils in Asia (A-HORCs), hosted by JSPS, was held in Nagoya, Japan. This meeting is convened every year to facilitate discussions among the heads of leading science-promotion organizations in Japan, China, and Korea on their countries' science and technology (S&T) policies and other matters of mutual interest.

This year's meeting was attended by JSPS president Dr. Susumu Satomi; Dr. Xie Xincheng, the vice president of the National Natural Science Foundation of China (NSFC); and Dr. Jung-Hye Roe, the president of the National Research Foundation of Korea (NRF). Each person talked on the perspectives from their countries under the theme "Challenges and Policies on Basic Research."

In parallel with this meeting, the 20th Northeastern Asian Symposium was held on the theme "Nuclear Physics in the 21st Century." It brought together 36 researchers from A-HORC-member countries who formed networks that will help them to advance to the next level of international collaboration.


Dr. Susumu Satomi, JSPS president

The 17th A-HORCs meeting, addressing "Approaches to improve the current evaluation mechanism (tentative title)," will be held along with the 21st Northeastern Asian Symposium on "The Internet of Things (IoT) with Intelligence (tentative title)." Both the meeting and symposium will be hosted by the NSFC and held in 2019 in Beijing.

International Policy Planning Division
International Research Cooperation Division I

The 16th meeting of the Heads of Research Councils in Asia (A-HORCs)


The 20th Northeastern Asian Symposium

Frontiers of Science (FoS) Symposium with Germany

In September 2018, JSPS co-organized the 14th Japanese-German Frontiers of Science (JGFoS) Symposium with the Alexander von Humboldt (AvH) Foundation. This event was held in Kyoto, Japan, from 6 to 9 September, with the participation of 56 outstanding young researchers of different nationalities from diverse academic backgrounds.

The symposium, which featured sessions from a broad range of disciplines, was designed and implemented by a planning group, co-chaired by Drs. Michael Schmiedeberg, Friedrich-Alexander University Erlangen-Nürnberg and Yasuhiro Hasegawa, Saitama University. Beginning their preparations for the symposium a year in advance, the planning groups from both countries selected and invited speakers from their respective research fields.

In FoS symposiums, every participant is given a role to play. An introductory speaker is expected to outline the topic of his or her session and to help the audience grasp the contents of cutting-edge research. This is followed by two speakers who provide examples of scientific advances made in their respective fields. The rest of the participants are invited for the next 55 minutes of abbreviated time dedicated to questions and discussion that begin immediately after the formal presentations. What makes the FoS symposiums exciting and challenging is the advancing of discussions that attempt to interweave the pieces and threads of diverse fields.

The 14th JGFoS Symposium marked the last bilateral symposium co-hosted by the AvH and JSPS. The two organizers are delighted to welcome the U.S. National Academy of Sciences as the third member of the Japanese-American-German Frontiers of Science (JAGFoS) symposiums scheduled to be hosted annually in alternating countries, beginning in Japan in 2019.

Please visit our website for more information:
http://www.jsps.go.jp/english/e-fos/index.html

International Research Cooperation Division I


14th JGFoS Discussion

The 3rd Japan-US Science Forum in Boston: The Science of Sleep

Award Ceremony

On 10 November 2018, the 3rd Japan-US Science Forum was held in Boston on the theme "The Science of Sleep." The venue was Harvard University in Cambridge, and this event was co-organized by the Consulate-General of Japan and United Japanese Researchers Around the World (UJA). Support was provided by the World Premier International Research Center Initiative (WPI) and the Conte Center at Harvard University. About 160 participated, including researchers from universities and research institutes in the US and Japan, along with interested members of the public.

The Forum opened with remarks by Dr. Kohji Hirata, Director, the JSPS Washington Office; followed by Mr. Rokuichiro Michii, Consul General of Japan in Boston; Prof. Mark C. Elliott, Vice Provost, Harvard University; and Prof. Takao K. Hensch from Harvard University. In his remarks, Prof. Hensch, the forum moderator, gave an overview of the topic. After the remarks, two keynote lectures were delivered, one by Prof. Masashi Yanagisawa, University of Tsukuba, International Institute for Integrative Sleep Medicine (IIIS), on the theme "Toward the Mysteries of Sleep" and one by Prof. Hiroki Ueda, The University of Tokyo, International Research Center for Neurointelligence (IRCN), on the theme "Organism-level System Biology by Next-generation Genetics and Whole-organ Cell Profiling."

After the lectures, a panel discussion was held on the theme "Sleep and Society." A panel of four humanities and social science experts discussed the connections among sleep, emotional and physical health, education, and cultures.

In addition, a poster session was held during lunchtime and break time. Participants had the chance to learn about 25 cutting-edge projects in many fields. The JSPS Washington Office Award, Consulate-General of Japan Awards, and the UJA Award were given to the best presentations.

JSPS Washington Office will continue to provide opportunities like this to strengthen the researcher network and to promote research collaboration between Japan and the United States.

Please see the Washington Office's website for more information about its activities and initiatives: http://jspsusa.org/wp/activities-in-short/

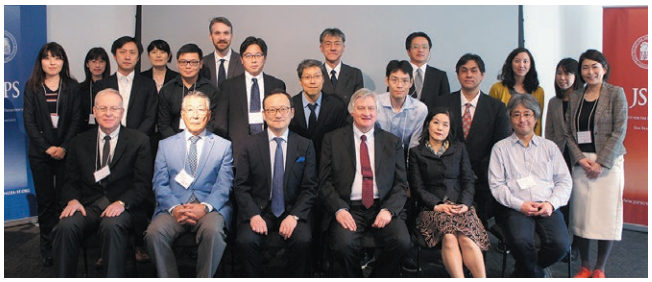
JSPS Washington Office

San Francisco Office 15th Anniversary Event: "World Premier Research in Japan"

On January 24 and 25, JSPS San Francisco (JSPS SF) held a symposium entitled "World Premier Research in Japan" at the UC Berkeley and Stanford University. This event commemorated the JSPS San Francisco Office 15th anniversary, while highlighting Japan's Ministry of Education, Culture, Sports, Science and Technology's (MEXT) World Premier International Research Center Initiative (WPI). The event was realized in collaboration with four WPI Centers (Kavli IPMU, AIMR, I²CNER and ITbM). Each institute introduced its organization and research achievements. Many presenters also touched on the organizational culture at these world-class research institutes.

The two-day event had 110 attendees, including researchers, students, and people from the private sector.

Opening remarks were given by the Consul General of Japan in San Francisco, Mr. Tomochika Uyama; the Director of the US-Asia Technology Management Center at Stanford University, Dr. Richard Dasher (A WPI's Program Committee member since 2007); the President of JUNBA (Japanese University Network in the Bay Area), Mr. Tomohisa Koyama; the Governing Director of JSPS, Mr. Noriyoshi Masuko; and Director of JSPS SF, Dr. Toru Tamiya. Dr. Dasher gave a talk emphasizing the competitive selection process under which the WPI centers were established and how these institutes empower young researchers starting out in their careers.



Dr. Toru Tamiya

The presentations from the WPI centers covered a wide variety of fields, such as astrophysics, materials science, energy, and biology. In addition to introducing their impressive achievements, the institutes emphasized their internationalized research environment and efforts to strengthen interdisciplinary research. Presentations were made by Kavli IPMU's Dr. Hitoshi Murayama, Founding Director and Dr. Khee-Gan Lee, Project Assistant Professor; AIMR's Dr. Motoko Kotani, Director and Dr. Tomoteru Fukumura, Professor; I²CNER's Dr. Petros Sofronis, Director and Dr. Toshinori Matsushima, Associate Professor; and ITbM's Dr. Tsuyoshi Matsumoto, Administrative Director and Dr. Naoyuki Uchida, Designated Associate Professor. They dealt with topics such as collaboration with universities and researchers in the US, the creation of new materials, technology transfer, and practical applications to the medical and agricultural fields. They drew a significant audience from the San Francisco Bay Area and larger Silicon Valley area.

For more information on this event, please visit JSPS SF's website: http://www.jspsusa-sf.org/

JSPS San Francisco Office

KVA-JSPS Seminar 2018 "New Windows to the Universe"

On 26 November 2018, a KVA-JSPS Seminar was held on the theme of "New Windows to the Universe" at the Royal Swedish Academy of Sciences (KVA), and was co-organized by the JSPS Stockholm Office, the Embassy of Japan in Sweden and KVA. This year's seminar took the form of a large-scale event, as Year 2018 marked the 150th anniversary of Japan-Sweden diplomatic relations.

The seminar started with opening remarks from four representatives of the organizers: Prof. Dan Larhammar, President of KVA; Ambassador Shigeyuki Hiroki, the Embassy of Japan in Sweden; Dr. Yasuhiro Iye, Executive Director of JSPS; and Prof. Christina Moberg, former president of KVA.

Keynote speakers from Japan were 2015 Nobel Laureate in Physics Takaaki Kajita, The University of Tokyo, who talked about neutrino observation at the Super-Kamiokande and the KAGRA project, and Dr. Hitoshi Murayama, UC Berkeley and The University of Tokyo, who mentioned that dark matter is expected to be observed in the near future.

Dr. Murayama

Stimulating lectures about dark matter, neutrinos and gravitational waves were also given by four other distinguished researchers. Then, a panel conversation was held with six researchers including Dr. Kajita and Dr. Murayama. They discussed subjects that researchers in both countries have tackled and shared their prospects for future research.


Panel Conversation

The approximately 100 attendees were riveted to the discussion, making the seminar a very fruitful event for all.

For more information on our events, please see the following website: https://www.jsps-sto.com/

JSPS Stockholm Office

UK-Japan Symposium on Highspeed Rail at the University of Birmingham, UK

On 21 September, a symposium planned by the members of the JSPS Alumni Association of the UK and the Republic of Ireland was held at Birmingham University. Entitled "UK-Japan Symposium on Highspeed Rail," the symposium's objective was to provide formal and informal arenas to build long-lasting relationships among Japanese experts and the UK's academia and industry.

The symposium addressed one of the most pressing issues in the UK. High speed rail systems make a significant difference to the public and provide a positive contribution toward the environmental, social, and economic sustainability of the communities they serve. They exist to provide social and economic connections, and people quickly take up the opportunities offered by increased mobility. Globally, high speed rails have proven to be the essential catalyst for regional growth and enhanced the quality of everyday life. This symposium had thus presented a great opportunity for the UK industry to access to extensive expertise from the pioneers in high-speed rails.

There were around 140 participants from academia, the rail industry, research institutions, rail suppliers, and local students. In addition, live streams on Facebook were watched worldwide by more than 2,100 online viewers.

JSPS London Office

Annual Activities Debriefing Session "JSPS Abend"

The JSPS Bonn Office held "JSPS Abend", the annual activities debriefing session attended by invitees from German partner organizations and Japanese and German academics, on 24 September. Dr. Susumu Satomi, President of JSPS gave the opening remarks, followed by congratulatory speeches by guests of honor Dr. Dorothea Rüland, Secretary-General, German Academic Exchange Service (DAAD), Mr. Takeshi Yagi, Japanese Ambassador to Germany, and Dr. Enno Aufderheide, Secretary-General, Alexander von Humboldt Foundation, with Prof. Michael Hoch, Rector, University of Bonn giving the opening toast. Prof. Hidenori Takagi, Director, Max Planck Institute for Solid State Research delivered a lecture on "Sociology of Interacting Electrons" and the attendees enjoyed a dinner and piano performance as they exchanged ideas and became better acquainted. Prof. Kenichi Kodaira, the previous Director of the JSPS Bonn Office, who retired from office at the end of September, was awarded the DAAD Medal of Honor and the Werner Heisenberg-Medaille from the Alexander von Humboldt Foundation in recognition of his contribution to academia over many years and his services to Japan-German exchange, as well as receiving words of appreciation from the German Research Foundation (DFG) and the German JSPS Alumni Association.


Dr. Aufderheide and Prof. Kodaira

JSPS Bonn Office

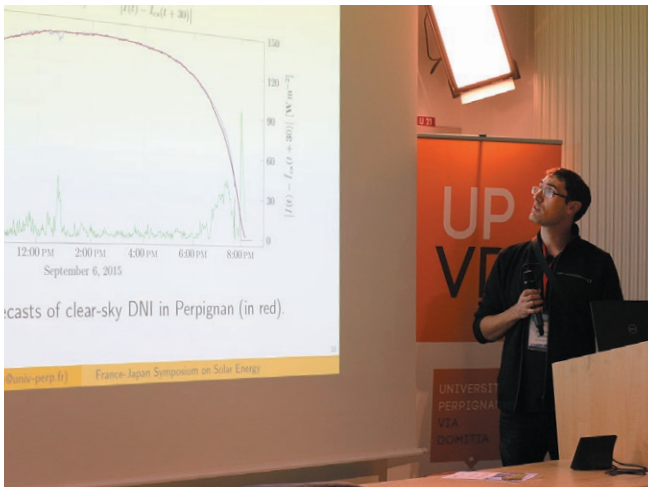
France-Japan Joint Forum Held on Solar Energy


The world's largest solar furnace in Odeillo

On 8 and 9 October, the JSPS Strasbourg Office held the France-Japan Joint Forum on Solar Energy in Perpignan in collaboration with the University of Perpignan Via Domitia (UPVD) and the Processes, Materials and Solar Energy Laboratory (PROMES-CNRS). Among renewable energies, solar energy is regarded as one of the most promising options to achieve a sustainable society and to reduce greenhouse gases. However, its development and implementation on a large scale is meeting with substantial social challenges.

The forum aimed to address these challenges by providing a venue for exchanges among Japanese and French researchers. The opening addresses were delivered by Prof. Kazuhiko Saigo, Director of the JSPS Strasbourg Office, and Prof. Didier Aussel, Vice-President in Charge of International Relations at UPVD. Throughout the two-day program, 13 frontline researchers in this field from Japan and France presented their latest research: Dr. Alain Dollet, PROMES-CNRS; Prof. Kensuke Nishioka, The University of Miyazaki; Prof. Tatsuoki Kono, Tohoku University; Prof. Masakazu Sugiyama, The University of Tokyo; Prof. Philippe Blanc, MINES ParisTech; Prof. Stephane Grieu, UPVD/PROMES-CNRS; Prof. Tomoyoshi Motohiro, Nagoya University; Dr. Nathalie Mazet, PROMES-CNRS; Dr. Vincent Goetz, PROMES-CNRS; Prof. Yoshiaki Nakano, The University of Tokyo; Dr. Jean-Francois Guillemoles, IPVF/NextPV; Dr. Olivier Carré, Enedis; Prof. Satarou Yamaguchi, Chubu University.

Following the highly informative lectures and discussions, a technical tour of the solar facilities in Odeillo and Targassonne, organized by Prof. Grieu, was held in the afternoon of the second day. The participants listened enthusiastically to the explanations given by the researchers working at each facility and were able to deepen their understanding of solar energy research in France.



Prof. Stéphane Grieu

For more information about the JSPS Strasbourg Office, please visit our site: http://jsps.unistra.fr/

JSPS Strasbourg Office

The Plant Microbiome: Symposium Held in Egypt

This symposium was held for three days from 19 November 2018 at Technical University of Berlin's El Gouna Campus on the shores of the Red Sea in Hurghada. The symposium was planned by Prof. Nabil A. Hegazi, Faculty of Agriculture, Cairo University and co-sponsored by organizations including the Alexander von Humboldt Foundation, JSPS, and German Academic Exchange Service (DAAD).

Around 130 attendees from 12 different countries such as Egypt, Germany, and Japan including researchers and young students came together and engaged in lively Q&A sessions after the lectures. Four participants were from Japan with three keynote speakers. Eighteen people from the JSPS Egypt Alumni participated holding a session on the final day giving scientific talks as well as an introduction to JSPS programs.

The symposium was a forum to debate plant-microbe interactions from many perspectives including on-farm use. While many of the presentations had an applied focus, it was also an opportunity for researchers at the leading edge in this field to all get together in one place.

Please visit the following websites for more information.
https://www.pgpmicrobiome2018.com/ (Symposium website)
http://jspscairo.com/en/news/2075/ (JSPS Cairo Research Station)

JSPS Cairo Research Station

NSFC-CAS-JSPS Joint Symposium "Innovative Drug Discovery and Development in the Context of Precision Medicine"

The JSPS Beijing Office held this joint symposium together with the National Natural Science Foundation of China (NSFC) and the Chinese Academy of Science (CAS) in Tianjin, China, on 12 October 2018. This was the sixth such joint symposium, and it was organized by Prof. Dexing Kong, Tianjin Medical University and Chairman of the JSPS Fellow Alumni Association in China, as part of the program of events celebrating the 40th year of the Japan-China Peace and Friendship Treaty.

At the opening ceremony, Prof. Kong gave the opening address followed by speeches from the co-organizers NSFC and CAS as well as other related institutions, describing the trajectory of exchange thus far and expressing hopes for future exchanges as well as the success of the symposium. Dr. Kaoru Hirota, Director of the JSPS Beijing Office made a speech and also described the JSPS's programs.

During the keynote speeches that followed, five researchers in the medical field from Japan and six researchers and experts in the field from the China took the stage. Each of the speeches generated enthusiastic questions from young researchers and students, resulting in a very fruitful symposium.

Please visit the following website for more information.
http://www.jsps.org.cn/jspsbj/site/newsinfo/hdjp_detail.jsp?pid=1242&ld=1539661303736&yu=J

JSPS Beijing Office

Workshop Compares the French Influence on Civil Law in Japan and in Brazil

An insightful workshop was held at the Faculty of Law of the University of São Paulo on 10 September 2018, under the auspices of JSPS and coordinated by JSPS Science Advisor, Prof. Masato Ninomiya. Japanese and Brazilian jurists, despite coming from geographically distant countries, found common features in French historical influence on their countries' development of civil law.

Prof. Masao Ikeda, Vice President of Musashino University, highlighted the influence of foreign culture and law during the modernization period of the Meiji Era. Although the German influence on Japan's constitution seemed to have prevailed in Japanese law, Prof. Ikeda recalled how the late Prof. Eiichi Hoshino evidenced the French influence on the civil code, especially the ideas of French jurist Gustave Boissonade, an influence that shaped Japan's laws, though with a needed adaptation to Japanese social and economic conditions.

From Aoyama Gakuin University, Prof. Emi Matsumoto also spoke about the French influence on the Japanese civil code, from an interesting and indirect perspective: the work of Montenegrin jurist Valtazar Bogisic, a correspondent of Gustave Boissonade, who studied a draft of the Japanese civil code. In the same panel discussion, Prof. Antonio Carlos Morato demonstrated that a similar process occurred in Brazil: French influence could be observed in the arts and culture, and consequently in the legal field from the intellectuals of that time, but the Civil Code of 1916 had the same divisions as Germany's BGB. Brazil's recent reform of the Civil Code in 2002, going through the test of real life, gives rise to the need for adaptation in Japan.

In the final session, Prof. Yasunori Kasai from The University of Tokyo talked about Roman law as a means of legal communication. He mentioned Ulpian's part of the Digest as a bridge to understand existing concepts such as *aequitas, epieikeia,* and *ubuntu* in different legal systems, respectively Roman, Greek, and South African law. His counterpart, Prof. Alessandro Hirata, starting from the Roman legal concept of *datio in solutum* (giving in payment) or repaying a debt with a different item than what was originally due, then discussed the reception of this concept in Brazil, Germany, and Japan. He demonstrated that the concept is used in Japan with a different function: addressing the needs of Japanese society.

In conclusion, the presentations gave the audience an opportunity to reflect on external influences on legal systems and the adaptation of legal concepts from other countries to meet social and economic needs, highlighting the major common features that connect geographically distant nations.

JSPS Science Advisor in São Paulo

Nepal JSPS Alumni Association Holds Symposium

On 5 October 2018, the 4th symposium of the Nepal JSPS Alumni Association (NJAA) was held in Kathmandu, Nepal. With the title "Sustainable Waste Management in Nepal: Challenge and Opportunities," the symposium had approximately 100 participants, including researchers, government officials, and others.

After the inaugural session, Mr. Masamichi Saigo, Japan's ambassador to Nepal, Dr. Buddhi Ratna Khadge (Secretary, Nepal Academy of Science and Technology), and Mr. Giriraj Mani Pokhrel (Honorable Minister of Education, Science and Technology) delivered their opening remarks.

Later, a scientific session was held, and two Japanese speakers gave lectures related to the symposium's theme. First, Dr. So Sasaki (Professor, Faculty of Economics, Chuo University) delivered a keynote presentation, "Linkage of Waste Trade to the Circular Economy." He introduced international trends in waste treatment, and the present situation in Thailand was highlighted, given the recent plastic waste policy in China.

Next, Dr. Misuzu Asari (Associate Professor, Graduate School of Global Environmental Studies, Kyoto University) spoke on "Solid Waste Management and 3R Activities toward the Sustainable Lifestyle." She explained the problems of solid waste treatment in the Asia-Pacific region and Kyoto prefecture in Japan in particular.

From the Nepalese side, Mr. Rabindra Rai (Director, Env. Division, Kathmandu Metropolitan City), Mr. Pratip Amatya (Env. Engineer, Lalitpur Metropolitan City), and Dr. Dhundi Raj Pathak (Solid Waste Management Specialist, Deutsche Gesellschaft für Internationale Zusammenarbeit) gave lectures on their specialized fields and approaches to environmental issues.

After all lectures ended, many questions were raised, exceeding the scheduled time. It was felt that the Nepalese people are deeply concerned with environmental problems.

JSPS Bangkok Office

Indonesia JSPS Alumni Association Holds Symposium

On 26 September 2018, the JSPS Alumni Association of Indonesia (JAAI) organized "The Role of JAAI to Promote Food, Water, Energy, Humanity and Environmental Security," its second annual symposium, at Bogor Botanical Garden in West Java, Indonesia. This symposium was highlighted as a commemorative event, as the year 2018 marked the 60th anniversary of diplomatic relations between Japan and Indonesia as well as the 40th anniversary of the MOU concluded between JSPS and Indonesian counterparts: the Indonesian Institute of Sciences (LIPI) and the Directorate General of Resources for Science Technology and Higher Education (DG-RSTHE).

At the opening ceremony, Mr. Hisashi Kato, Advisor for International Affairs, JSPS delivered opening remarks on behalf of the invited guests. Mr. Kato extended his appreciation for the long-term partnership between Japan and Indonesia as well as further scientific collaboration.

As this symposium was also sponsored by the World Premier International Research Center Initiative (WPI Program), Dr. Hiroshi Suito (AIMR, Advanced Institute for Materials Research, Tohoku University, one of the WPI institutions) was invited as a keynote speaker. Dr. Suito presented how mathematics and the computer sciences can contribute to solving contemporary environmental problems.

Dr. Hiroshi Suito (Tohoku University)

In addition to the keynote speech, three scientific presentations were made by invited speakers from both Japan and Indonesia, namely Assoc. Prof. Hitoshi Shirakawa, Tohoku University, Prof. Junji Sugiyama, Kyoto University, and Dr. Heny Suseno, National Nuclear Energy Agency. Moreover, Prof. Ibrahim Tantawy, President of JSPS Alumni Association in Egypt (JSPSAAE), gave a presentation on his current research and introduced alumni activities in Egypt. Finally, Prof. Subyakto, President of JAAI, delivered the closing remarks, and this symposium, attended by approximately 120, ended as a great success.

JSPS Bangkok Office

2nd Annual Science Symposium Held in Australia

On 1 and 2 November, the JSPS Alumni Association in Australia (JSPSAAA) held its 2nd annual Science Symposium at RMIT University in Melbourne. Co-hosted by RMIT's Centre for Environmental Sustainability and Remediation (EnSuRe), the symposium focused on "Research, innovation, and industry engagement in Japan and Australia."

The Science Symposium began with welcoming remarks from the outgoing JSPSAAA President, Dr. Graziella Caprarelli; EnSuRe's acting-Director, Associate Professor Graeme Allinson; and Ms. Mihoko Toyoshima, Section Chief of JSPS Headquarters. This was followed by an entertaining presentation on Japan-Australia relations by the Consul General of Japan in Melbourne, Mr. Kazuyoshi Matsunaga.

Plenary talks were delivered by Prof. David Vaux from the Walter and Eliza Hall Institute of Medical Research entitled "From humans to mice to worms, a new way to treat leukemia," as well as one of the Australian Academy of Science's "Superstars of STEM," Dr. Tien Huynh from RMIT University, who spoke on "The future of environmental sustainability."

During the two-day symposium, approximately 20 speakers introduced their cutting-edge research, many of whom are involved in Australia-Japan collaborations, including in such fields as medical science, mathematics, ecology, chemistry, and space science. The participants enjoyed the symposium as a fruitful opportunity to interact with each other and to form collegial ties and networks.

JSPSAAA's annual general meeting was held in conjunction with the symposium.

International Policy Planning Division


RMIT University


Dr. Caprarelli and Consul General Matsunaga

Indian JSPS Alumni Association Held International Conference in Santiniketan

JSPS and the Indian JSPS Alumni Association (IJAA) held the "International Conference on Advancement in Science & Technology (ICAST-2018)" at Visva-Bharati University in Santiniketan, India, on 3-4 September.

The venue Visva-Bharati is a university that was founded by poet Rabindranath Tagore, Asia's first winner of the Nobel Prize for Literature.

A lantern lighting ceremony took place during the opening ceremony to commemorate the symposium and speeches were given by Prof. Sabujkoli Sen, Vice-Chancellor of Visva-Bharati University, Mr. Masayuki Taga, Consul General, Consulate-General of Japan, Kolkata, and Ms. Atsuko Nakatsuka, Head of the International Policy Planning Division, JSPS Headquarters.

During the two days period over which the seminar was held, a total of 17 lectures under the broad topic of "Advances in science and technology" were delivered by researchers from Japan and India working at the front line in the science and technology field. From the Japanese side, Prof. Yasuhiro Nakazawa of Osaka University delivered a lecture titled "Novel Magnetic and Superconducting Features of π-Electrons in Molecule-based Compounds" and Prof. Shinya Koshihara, Tokyo Institute of Technology delivered a lecture titled "Ultrafast Photo-Control of Charge-Structure-Spin Coupled Order in Strongly Correlated Quantum Matters for the Future of Ultrafast Quantum Technology," while Dr. Mitsuhiko Maesato of Kyoto University delivered a lecture titled "Artificial Control of Materials' Properties."

In parallel with the lecture presentations, researchers and students conducted poster sessions (number of posters: 184) and Japanese universities exhibited at booths (number of institutions that participated: 14). Neighbouring senior-high school students were also invited and an interactive session "Interaction with Japanese Scientists & University Officials" was held between the senior-high school students, young researchers, and the participants on the Japanese side, at which very lively debate ensued.

Over 300 researchers and students participated at this symposium listening very attentively as well as continually actively engaging in Q&A sessions. The symposium contributed to further network building between Japanese and Indian researchers as well as being a forum for further advancing academic research in both countries.

For further details about the Indian JSPS Alumni Association, please visit the Alumni website:
http://www.indianjspsalumni.org/

International Policy Planning Division


Inaugural Session


Interactive Session

JSPS KOREA Fellows Alumni Association Holds the 4th Workshop

On 7 December 2018, JSPS and the JSPS KOREA Fellows Alumni Association (Association of the Korea-Japan Researcher Network) held the 4th workshop at Chonnam National University in the city of Gwangju, Korea. The JSPS KOREA Fellows Alumni Association holds a symposium every spring and since 2015 has also been holding a workshop in autumn, working proactively to further academic exchanges between Japan and Korea and to contribute to joint international research.

The theme of the workshop was "Social innovation and social and economic roles." The Center for Regional Development at Chonnam National University, which was the venue for the workshop, was selected as a key research center of the National Research Foundation of Korea (NRF) and is conducting research on the topic of "Socio-economic globalization designed to foster sustainable innovation." At the beginning of the workshop a speech was given by Chairman Byung Eun Park, followed by Eun Mi Han, Vice President of Chonnam National University, Prof. Ju-Mong Na, Chonnam National University, and Ms. Atsuko Nakatsuka, Head of the International Policy Planning Division, JSPS, presentations on the workshop theme by Japanese and Korean researchers. The speakers presenting on the topic of social and economic roles and social innovation from the Japanese side were Prof. Tetsuya Endo, School of Management Economics, Aomori Public University, Prof. Kenichi Kitajima, Community and Human Services Faculty, Rikkyo University and from the Korean side Prof. Kyoung Park, Department of Economics, Mokwon University and Director Yeongseon Yoon of the Gwangju Support Center for Social Economy. After the lectures, there was an introduction to JSPS programs and presentations were given from people who had participated in the JSPS Bridge Fellowship Program, with so many different questions that it went over the allocated time indicating the high level of interest amongst the attendees.

Young researchers and graduate students also participated in the workshop, not just alumni association members and professors, and it is hoped that the workshop will not only be significant for their future research activities but also produce many young researchers who will participate in new Japanese-Korean academic exchanges.

International Policy Planning Division

German JSPS Club Meeting Held in Kyoto

The 7th Meeting of the German JSPS Club in Japan was held in November 2018 on the Katsura Campus of Kyoto University. The co-organizers of this year's event included, among others, KURA (Kyoto University Research Administration Office) as an institutional member of the JSPS Club.

Nearly 60 people joined the meeting, a large proportion coming from the Kansai region, and nearly half of the participants had a connection with Kyoto University. The meeting started with a series of greetings. Prof. Hideo Saji (KURA director), Prof. Heinrich Menkhaus (Chairman of the German JSPS Club), Prof. Shunichi Tazuke (President, Japanese German Society Kyoto), Ms. Atsuko Nakatsuka (JSPS, Head of International Policy Planning Division) as well as Assoc. Prof. Jan-Dirk Schmöcker (Kyoto University), as the local host, set the framework for the meeting through short speeches that described the importance of the meeting from their respective positions.

Following this, the academic exchange was started by a series of scientific presentations. The speakers were chosen to accommodate the various academic disciplines present in the Club and to achieve a mix between German and Japanese as well as younger and renowned scientists.

To begin, Prof. Kazuhiro Takii (International Research Center for Japanese Studies, *Nichibunken*) spoke about the dwindling public prominence of the Meiji Revolution, which had its 150th anniversary in 2018. Following this, Assoc. Prof. Makoto Kishimoto (Kyoto Sangyo University) gave a talk on astrophysics. The first part of the meeting was capped off by a talk from Assoc. Prof. Mizuki Takenaka (Kyoto University) on "RNA editing in plant mitochondria and chloroplasts."

After the coffee break, Prof. Guido Rappe (Osaka University) gave a talk on the origin of language. Following this, Prof. Hiroshi Abe (Kyoto University) gave a talk in which he explained the value of nature conservation through the meaning of the Japanese words *shizen* and *onozukara*. Then, Assistant Prof. Jacqueline Urakami (Tokyo Institute of Technology) talked on emphatic technology. The final scientific presentation was given by Dr. Shoma Ishikawa (Kyoto University), who spoke about "brain aging" and its importance for aging societies.

The last presentation was given by Ms. Kei Ayukawa (KURA). She reported about the various activities at Kyoto University that support collaboration with German universities. After the presentations, a reception sponsored by the German Consulate General Osaka-Kobe was held for our networking. Overall, it was a well-received event that hopefully contributed to new ideas and friendships across academic borders.

International Policy Planning Division

Science Dialogue

Scientific Adventure by a French JSPS Fellow: "Be curious and explore the world"

Dr. Joan Perez

Ever since he was born in Paris, Dr. Joan Perez has not settled down anywhere. He went to elementary school in Bretagne, junior high school in French Guiana, and high school and university in the South of France. "Because my father was working for the military, my family and I had to keep moving," Dr. Perez says. The real-life experience of spending his younger days in various cultures nurtured his curiosity about the world. That's why he went to Congo for his master's thesis and to India for his PhD.

Now he is in Tokyo doing research at The University of Tokyo as a JSPS Research Fellow. He specializes in quantitative geography, which adopts statistical and computational methods to seek and explain patterns and dynamics over geographic space. Results are used to provide recommendations for a more sustainable development of societies.

Dr. Perez prepared his Science Dialogue presentation for Tokyo Metropolitan Tama High School of Science and Technology with an expectation to induce the students to have a desire to discover other countries and their cultures. "I want them to understand that traveling to other countries can bring them a lot, by forever forging and sharpening their minds. Ultimately, it would be perfect if some of them were inspired by career opportunities in academics."

On 18 July 2018, more than 200 second-grade students welcomed Dr. Perez as a guest lecturer. At the start, he introduced his background and the work/daily life of a researcher, emphasizing the importance of mastering English to pursue an academic career, "Learning English multiplies career opportunities, and scientific literacy is not translated into local languages."

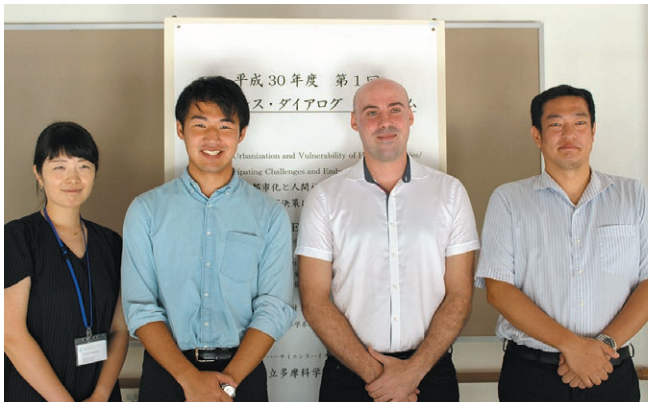
Using colorful pictures and charts, he explained how fast our society and economy have developed, and how humanity will be facing environmental/food crises brought about by rapid growth and urbanization. After describing his own research — quantifying through computations of the similarities and dissimilarities among three of the world's metropolitan areas with strong cultural and

societal differences (Osaka, Marseille, and Rio de Janeiro) — he quizzed the students, showing them fascinating photos that he took all over the world. The students showed a great deal of interest and some of them even took the challenge to answer questions in English.

"It was a very attractive presentation, full of colorful images and photos," one of the students said after the lecture, with his eyes shining, "I am inspired with the possibility of a career path as an environmental scientist."

Just as he wished, Dr. Perez succeeded in giving a precious gift to the students.

Public Relations Office



Dr. Perez and his colleague, Mr. Yamano in the middle with Mr. Nishino and Ms. Kubo from Tama High School of Science and Technology

Research and Life in Japan by a JSPS Research Fellow No. 48

Dr. Laura Lander

Developing Efficient and Sustainable Cathode Materials for Batteries

JSPS Postdoctoral Fellow, The University of Tokyo, 2017–Present
Project Researcher, The University of Tokyo, 2016–2017
PhD (Materials Chemistry), Collège de France / Université Pierre et Marie Curie, 2016

Through research experiences in Switzerland and France, Dr. Laura Lander, originally from Germany, now works at The University of Tokyo under a JSPS Fellowship. She is resourceful and imaginative, bringing an international perspective, so we featured this promising researcher in this volume.

Q. You have been a JSPS fellow for about a year. What research do you currently do at the Graduate School of Engineering, The University of Tokyo?

I started my JSPS fellowship in October 2017, almost one year after joining Prof. Yamada's lab. My research work focuses on the development of new cathode materials for Li- and Na-ion batteries. I am especially interested in materials that are environmentally benign, nontoxic, and have a low cost. I try to understand how the cathode material behaves upon charge/discharge, such as the structural changes, and how the electrochemical performance can be optimized.

Q. Why batteries and why did you choose to become a researcher?

My primary passion lies in the chemistry and the process of creating and exploring new materials. At the same time, I wanted to work in applied research rather than fundamental research. Therefore, I turned to materials science, and more specifically energy-related materials, which can be used in fuel cells, solar panels, and batteries. I found that working in the battery field perfectly combines chemistry and application. Moreover, I am doing research for a sustainable energy future, which motivates me a lot during my everyday research routine. I always want to explore, learn something new, and to be challenged – this is why I became a researcher.

Q. Why did you choose Japan and your current institution?

As I mentioned, I am open to and go for challenges. This does not count only for my research but also for my personal development. When it comes to new technologies, the Japanese have always been at the forefront, and their creativity and sense of innovation really amaze me. This definitely was a big incentive for me to come to Japan and to be part of the research world here. I was very lucky to be accepted to work in Prof. Yamada's lab, since his group is internationally renowned and respected in the battery community. Actually, I visited Tokyo, Osaka, and Kyoto with a friend for sightseeing in 2015 for the first time and enjoyed each city's distinctive feel and differences with European cities. This also made me put Japan on my wish list.

Q. Getting back to your research, could you expand on what you are trying to find?

My research goal is to develop new high-voltage cathode materials for Li- and Na-ion batteries for a variety of applications, such as electric vehicles and grid storage. Generally speaking, the work has two phases: first, synthesizing a new material or modifying/optimizing existing materials, and second, evaluating the electrochemical properties and their applicability in batteries. The voltage of a cathode material depends on various parameters, among others these are the transition metal redox center and the nature of the structural framework, where Li/Na is located. I am trying, by varying both parameters, to increase the working potential of the cathode. However, a good battery material cannot only be measured on its potential; other factors need to be taken into account, including the high capacity, cycling stability, lifetime, and safety. Therefore, when I think about possible new materials, I try to consider all of these factors.

Q. What do you like best about developing new materials?

I really enjoy the creative process. Like an artist, I have a sketchbook, in which I note ideas for new compounds, what the starting materials could be, and possible synthesis conditions, of course always having in mind the battery application. The actual synthesis of a new material can, at times, be a very tedious and frustrating trial-and-error process. However, when the synthesis turns out successful, it gives me an amazing feeling. I also really like the large fraction of luck and coincidence. I often end up with an unpredicted material, which nevertheless shows interesting properties. My research is like baking a cake: though the ingredients are important, nevertheless the amount, the way of dealing with them, room temperature, containers, and other elements influence the outcome. This is an interesting, fascinating, and long journey.

With Prof. Atsuo Yamada

Q. What do you plan to do after your JSPS fellowship?

I have not fixed my next steps yet, but I would like to continue as a researcher in the energy field.

Q. Please give some advice to young researchers who may be thinking about doing research in Japan.

Regarding joining a Japanese research team, I think it is important to get to know the

members before coming to Japan in order to make the start easier. Many things work differently here – not only the language, but also work culture and manners – and it helped me a lot that I already knew a few people here. The best way is to ask other foreign students/researchers on the team for advice because they were in the same situation and they can help you avoid the pitfalls. For the private aspect, I feel it is very helpful to live in a shared apartment. It makes it much easier to connect with new people. Tokyo is a huge city – I think in the beginning one can easily feel a bit lonely and lost. Of course, everyday life here can be at times a bit overwhelming, but it is an amazing once-in-a-lifetime experience.

Q. What is your lab like?

Our lab is quite big and we have a lot of equipment, which is great because even though the number of people is rather large, we rarely have any waiting time. Moreover, for some of the more specialized instruments, we have the opportunity to learn how to use them ourselves. This is something I really appreciate. We also have a good mix of people in terms of nationality and gender, which gives a good ambiance to the work environment.

Q. How do you think you and your research will contribute to the world?

I hope that my results will help the battery research community to get a tiny bit closer to the "ideal" cathode material.

Q. How did you like visiting a high school in Tokyo for a lecture through a JSPS Science Dialogue last June?

It was a great experience to visit a Japanese high school and to get an impression of what their school life is like. Everyone was so kind, the students and teachers; I really enjoyed presenting my research and discussing this with everyone afterwards. I was amazed by their curiosity and engagement. Of course, preparing the presentation takes a bit of time, but I can only recommend this to other JSPS fellows. It is really a unique experience.

Host Professor's thoughts:

Prof. Atsuo Yamada, who is well known for the development of electrochemical energy storage devices, welcomes researchers from various background to his lab. This is why there are more international and female members than average. He first met Dr. Lander at a conference in France and decided to offer her a position, as he had known her supervisor well and she was a promising researcher. He is delighted to have her as the fifth JSPS Fellow because she is well suited to research in his lab and Japan, inspiring other members with her international research experiences in different countries in Europe.

For details on Prof. Yamada's lab, please see: http://www.yamada-lab.t.u-tokyo.ac.jp/en/

Mt. Odake Area

The University of Tokyo and Its Surroundings

The Hongo Campus of the University of Tokyo is centrally located in the city, yet it is peaceful and calm. In the autumn, the ginkgo trees on the campus turn golden, definitely a special sight. The campus is only a few minutes from the vibrant Ueno district, which offers a variety of good *izakaya* (pubs) and a stunning park. During the cherry blossom season, people enjoy strolling through the park or having a picnic under the cherry trees, also called *hanami*.

Tokyo is an amazing city, offering everything from delicious food to cultural events and unique entertainment. The city is an agglomeration of many small districts, each one with its own flair. Depending on the mood, I visit distinct neighbourhoods such as Asakusa or for shiny Tokyo; I also go towards Shinjuku or Akihabara. Even though it is one of the biggest cities in the world, I was surprised by the large number of parks, which, depending on the season, completely change their colours.

Once in a while, I flee city life and enjoy Japan's nature. A one and a half hour train ride from Tokyo takes you to Mount Odake's gorgeous hiking trails. Especially in misty weather, the ambiance is mystical. Near the train stations, there are small restaurants offering local food and homemade *soba* or *udon* (noodle) dishes.

Another place worth a visit is Nagano in wintertime. Near Nagano City there is a special park where you can see wild macaques (Old World monkeys) getting together and enjoying a bath in the hot springs. If you are very lucky, they even join in the hot springs set aside for people. In the summertime, you can either get away from the heat by going all the way up north to Hokkaido or jump into the turquoise ocean surrounding the Okinawa islands.

Seahorse
A marine fish of the family Syngnathidae in the order Gasterosteiformes. The seahorse's scientific name, *Hippocampus*, derives from the ancient Greek *hippos* (horse) and *kampos* (sea monster), and refers to their head, which is suggestive of a horse, and curled tail. Around 8 cm in length, the shape and coloration of seahorses vary widely between individuals. What is surprising about this species is that the female deposits her eggs in a brood pouch on the male's abdomen. The eggs hatch inside the pouch, leaving him to give birth to the young.

About JSPS

The Japan Society for the Promotion of Science (JSPS) operates as an independent administrative institution to perform the following main functions: fund scientific research, foster researchers, promote international scientific exchange, and advance university reform.

Crowing Rooster

From days of old in Japan, it has been the belief that the vigorous cry of the rooster in the gray of the morning augurs the coming of a new and bright day. As the crowing rooster can therefore be thought of as a harbinger of the kind of new knowledge that promises a brilliant future for humankind, it was chosen as the emblem of the Japan Society for the Promotion of Science. This emblem was designed in 1938 by Professor Sanzo Wada of Tokyo Fine Arts School to depict the rooster that symbolizes the breaking dawn in a verse composed by Emperor Showa.

Contact Information quarterly@jsps.go.jp

Published by JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE
Edited by JSPS Public Relations Office