



# JSPS QUARTERLY

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

■ FEATURE

Nobel Prize Dialogue Tokyo 2015

No. 51 2015 Spring





**Nobel Prize Dialogue**  
Science & Society

# Nobel Prize Dialogue Tokyo 2015



On 1 March, Nobel Prize Dialogue Tokyo 2015 was held in the conference hall at the Tokyo International Forum. Produced by JSPS and Nobel Media, this was the first time for this publically open-forum to be held outside of Sweden. From 2012, the event had been held under the title “Nobel Week Dialogue” around the time of the Nobel Prize Ceremony.

At this whole-day event, a vibrant constellation of seven Nobel laureates, including Drs. Shinya Yamanaka, Koichi Tanaka and Hiroshi Amano from Japan, and world-leading scientists delivered lectures on science at the frontiers of their respective fields and participated in panel discussions.

In the opening ceremony, welcoming messages were offered by JSPS president Dr. Yuichiro Anzai and Nobel Foundation executive director Dr. Lars Heikensten on behalf of the cosponsoring organizations. Then, opening remarks were delivered by Mr. Hakubun Shimomura, Minister of Education, Culture, Sports, Science and Technology.

This *dialogue* on “The Genetic Revolution and Its Future Impact” explored the impacts of life science advances in such fields as genetics and genomics on future society. Among the various cutting-edge topics addressed were medical applications of iPS cell research, personalized medicine, and ramifications of genetically modified foods. On these and other topics inter-connecting science and society, a spirited discussion was advanced via a program of lecturers, panel discussion streams, and Q&A sessions with the audience.

The curtain closed on this immensely powerful event with a panel discussion among exclusively the Nobel laureates. Over the course of the day, the audience, comprising both Japanese and people from around the world, had engaged in a stimulating dialogue with the eminent lecturers, bringing science and society yet another step closer together. People, including in other countries, who were unable to attend the event could view it live over the Dialogue’s dedicated website.

For highlights of the event, please see the video posted on the following webpage:

<http://www.nobelprizedialogue.org/tokyo2015/>

## ● THU-CAS-JSPS Symposium Held on Emerging Photonics

On 7 November, Tsinghua University (THU), Chinese Academy of Sciences (CAS) and JSPS held a joint symposium. Venued at THU, this symposium was the first time for the three organizations to team up to hold an event.

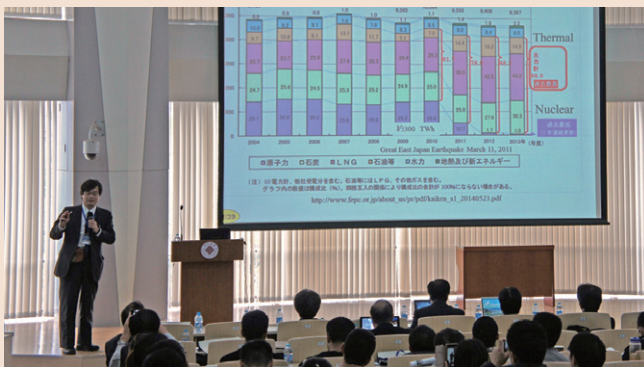
This symposium constituted another jump forward in JSPS Beijing Office director Prof. Osamu Wada's effort to expand the network among Chinese and Japanese researchers who have gotten to know each other through participation in international conferences or various research exchanges. The Office planned the symposium and selected its speakers in close consultation with THU's Prof. Luo Yi and Prof. Huang Yidong and CAS's Prof. Huang Yongzhen. The symposium's theme reflects the Prof. Wada's field of specialization: Photonics.

It featured presentations by six eminent researchers from each Japan and China. First, Prof. Shigehisa Arai, Tokyo Institute of Technology, spoke about the significant contributions that Japanese researchers are making in developing the semiconductor lasers that undergird today's optical communication technologies, while offering a future vista of information communication and processing being advanced by research on optical integrated

circuit technologies. It spurred a vigorous discussion among the participants on various aspects of optical technology research. Then, Prof. Hiroshi Amano, Nagoya University, Prof. Wang Junxi, CAS Institute of Semiconductors, and Prof. Luo Yi introduced the latest research being conducted in Japan and China to impel the development of solid-state lighting technologies.

More than 150 researchers and students attended the symposium, which provided a stage for a vigorous exchange of views and information. Materials related to each presentation are posted on the Beijing Office's webpage.

It was announced in October, the month before the symposium, that one of its lecturers, Prof. Hiroshi Amano, had been selected for the 2014 Nobel Prize in Physics. Hurriedly, a commemorative lecture by Prof. Amano was arranged and held at THU on the eve of the symposium. Attracting some 200 attendees, the lecture highlighted milestones in Prof. Amano's career from what had inspired him to embark upon research through the research initiative for which he won the Nobel Prize. After the lecture, Beijing Office director Prof. Wada presented Prof. Amano a memento of JSPS's appreciation.



Lecture by Professor Amano



Prof. Wada presenting a memento to Prof. Amano

## ● JSPS President Attends Nobel Prize Ceremony and Banquet

Accompanied by his wife, JSPS president Dr. Yuichiro Anzai went to Sweden to attend the Nobel Prize Ceremony and related events, one being the Nobel Week Dialogue held on 9 December by Nobel Media. Launched in 2012, the Nobel Week Dialogue is held every year around the time of the Nobel Prize Ceremony. It is an open symposium oriented to the general public. The theme of this year's event was "The Age to Come," addressed by more than 20 eminent scientists, including six Nobel laureates, and world-renown experts via a program of presentations and panel discussions. During an intermission, Nobel Foundation executive director Dr. Lars Heikensten and Dr. Anzai signed an agreement on the joint NF-JSPS holding of Nobel Prize Dialogue Tokyo 2015.

On the morning of the 10<sup>th</sup>, Dr. Anzai and Mr. Yoshio Yamawaki, Director-General for International Affairs, Ministry of Education, Culture, Sports, Science and Technology (MEXT), visited the Nobel Museum, where they talked with its director, Dr. Olov Amelin, about "The Nobel Prize Dialogue Tokyo 2015" and the Foundation's plans to build a new Nobel Center.

In the evening, Dr. Anzai attended the Nobel Prize Ceremony and Banquet with his wife, paying tribute to the three Japanese laureates for their marvelous achievements in the field of physics.

On the 11<sup>th</sup>, accompanied by his wife and JSPS Stockholm Office director Dr. Hideo Akutsu, Dr. Anzai attended a MEXT-hosted luncheon, where they enjoyed a spirited conversation with the newly crowned Japanese laureates Dr. Hiroshi Amano, professor, Nagoya University, and Dr. Shuji Nakamura, professor, University of California, Santa Barbara, their wives, and other guests about the future of Japanese education and research.



Dr. Amelin, Dr. Anzai and Mr. Yamawaki



# Presentation Ceremony Held for 2014 International Prize for Biology

On December 1<sup>st</sup>, the 30<sup>th</sup> ceremony for awarding the International Prize for Biology was held in the presence of Their Majesties the Emperor and Empress at the Japan Academy, located in Ueno Park, Tokyo. The ceremony was organized by the Committee on the International Prize for Biology, chaired by Dr. Takashi Sugimura, president of the Japan Academy.

At the ceremony, an opening message was delivered by Dr. Sugimura and a report on the selection process was provided by Dr. Yoshinori Fujiyoshi, chair of this year's Selection Committee, after which the prize and an Imperial gift were presented to this year's awardee, Prof. Peter Crane, Yale University, USA. After congratulatory remarks delivered by Prime Minister Shinzo Abe and MEXT Minister Hakubun Shimomura, the ceremony concluded with an acceptance address from Prof. Crane.

An International Prize for Biology Commemorative Symposium and Lecture, titled "Expanding Realm of Taxonomy and Evolutionary Biology," was held on December 2-3 in Tokyo, co-organized by JSPS and the National Museum of Nature and Science.



International Policy Planning Division

Prof. Crane talking with Emperor and Empress at reception

## Excerpt from Acceptance Address by Prof. Peter Crane

*A pervasive theme in my research, which has also seen greater emphasis in palaeobotany as a whole over the past few decades, has been the integration of information from fossils and living plants toward a more complete understanding of botanical evolutionary history. Such integration has been facilitated by the development of phylogenetic methods, but also requires fossils that are preserved sufficiently well to allow meaningful comparison with living counterparts.*

*In the case of early land plants, advances in research on Silurian and Devonian fossils eventually made it possible to combine palaeobotanical discoveries with insights from living "green algae," "bryophytes" and vascular plants into a new and more comprehensive understanding of the initial diversification of plants on land.*

*In the case of angiosperms, pioneering research on exquisitely preserved ancient flowers by Else Marie Friis in the early 1980s opened up a new and unexpected field of study. In particular, the material that Else Marie Friis, Kaj Raunsgaard Pedersen and myself have investigated from the Early Cretaceous of eastern North America and Portugal, combined with improved knowledge of living angiosperms, has provided a more detailed glimpse into the early evolution of flowering plants than would previously have been thought possible. The same approaches are also providing new insights into other extinct seed plants, some of which are undoubtedly relevant for understanding angiosperm origins.*

*In paleontology we rely heavily on using the present to interpret the past. Yet at the same time, the importance of contingency*

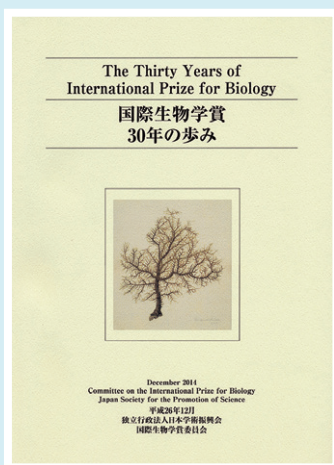
*and extinction, both in ecology and evolution, reminds us that understanding the present also requires understanding history. The value of paleontology lies not simply in extrapolating the present back into the past, but in expanding knowledge by illuminating ancient worlds that often differed in important ways from the world of today. Such perspectives, rooted in deep history, emphasize the grandeur of evolution over vast spans of geologic time. They also underline the need for enlightened environmental management in the face of rapid contemporary environmental change. In honoring how the past helps us understand the present, the Japan Society for the Promotion of Science reminds us of our place in the world, and the value of humility as we together influence the future of our planet.*

For the full text of Prof. Crane's acceptance address, please visit: <http://www.jspg.go.jp/english/e-biol/index.html>



# International Prize for Biology Marks Its 30<sup>th</sup> Anniversary

A commemorative booklet, titled *The Thirty Years of International Prize for Biology*, has been issued to celebrate the 30<sup>th</sup> anniversary of the Prize. It contains the history of the Prize and essays written by last ten Prize recipients. The booklet is posted on the Internet and can be viewed at: <http://www.jsps.go.jp/english/e-biol/index.html>



The thirtieth award of the International Prize for Biology was made in 2014, marking the third decade of the Prize's operation.

The Prize was initially created to commemorate the 60<sup>th</sup> year of Emperor Showa's reign and his over long years of biological research. From the 25<sup>th</sup> Prize, it has also commemorated Emperor Akihito's contributions to the Prize's advancement and to his dedication to fish taxonomical research. In both cases, the Prize is meant to encourage frontier research in the biological sciences.

Over these 30 years, many changes have occurred in the realm of biology. Amidst them, the International Prize for Biology has continued steadfastly to support research at the bedrock of the

biological sciences while contributing to the advancement of biological sciences by recognizing researchers who have made eminent contributions to its progress. As an award in a region of biological science oriented to "science for science," the Prize works to advance uniquely original and creative forms of basic biological research.

There are other international awards issued from Japan, including those that recognize biology-related achievements. However, they each have a specific focus and underlying philosophy that differs from those of the International Prize for Biology. They include awards in such areas as technological development, environmental science, and integrated research.

Having been highly appraised from various perspectives, there are International Prize for Biology recipients who have been honoured with other prestigious awards. For example, Dr. Peter Hamilton Raven, who received the second International Prize for Biology in 1986, and Prof. Edward Osborne Wilson, who received the ninth in 1993, were awarded the International Cosmos Prize in 2003 and 2012. That is, expanding upon the research achievements for which they were recognized by the International Prize

for Biology, they gained further recognition for their results in wider areas of endeavour. As another example, Prof. John Bertrand Gurdon, who received the third International Prize for Biology in 1987, went on to be awarded the Nobel Prize in 2012. He was given the International Prize for Biology for his landmark work on amphibia; then, was recognized again a quarter of a century later for his highly appraised research on embryonic stem cells. Such cases testify to the keen foresight inherent in the International Prize for Biology.

I look forward to the further development of the International Prize for Biology and to its continued contribution to advancing basic research in the biological sciences.



Dr. Kunio Iwatsuki, chair of the Publication Committee



# Global Symposium on Scientific Breakthroughs to Be Held in Japan

As mentioned in other *JSPS Quarterly* articles, the Global Research Council's fourth Annual Meeting will be held in Tokyo on May 27-28. In tandem with its theme "Research Funding for Scientific Breakthrough," JSPS will organize a publically open "Global Symposium on Scientific Breakthroughs" to be held on May 26, the day before the GRC meeting. (GRC: <http://www.jsps.go.jp/english/e-grc/index.html>)

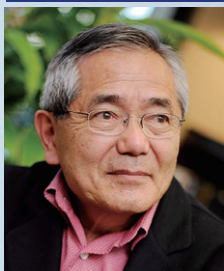
Its speakers and panelists will include Prof. Ei-ichi Negishi, H.C. Brown distinguished professor of Department of Chemistry, Purdue University (2010 Nobel Laureate in Chemistry), Dr. France Córdoba, director of National Science Foundation (NSF) in the US, and Prof. Peter Strohschneider, president of German Research Foundation (DFG). JSPS president Dr. Yuichiro Anzai will lead the panel discussion as its moderator. Their presentations and the discussion advanced at the symposium will explore and identify good practices in support of research activities that lead to scientific breakthroughs. As the GRC Annual Meeting will also be held on a theme of scientific breakthroughs, the symposium's results will be reported at it.

As a side event of the GRC Annual Meeting, a roundtable discussion on "Building Education and Research Capacity: How to Support Young Researchers for Sustainable Development in Africa" will be held in parallel with the symposium. It will provide an open and informal platform for exchanging views on this issue of critical importance to the GRC—that is, on how to promote capacity building particularly among young researchers, especially in Africa. The outcomes of this discussion will be also reported at the GRC Annual Meeting.

Further information regarding the GRC Annual Meeting and its side events, including its registration procedure, will be posted on the website: <http://grc2015tokyo.jp>

## Keynote Speech

### Main Speaker



**Prof. Ei-ichi Negishi**  
Purdue University  
(2010 Nobel laureate in Chemistry)

### Moderator



**Dr. Yuichiro Anzai**  
President, JSPS

## Panel Discussion

### Main Panelists



**Dr. France Córdoba**  
Director, National Science  
Foundation (NSF)



**Dr. Peter Strohschneider**  
President, German Research  
Foundation (DFG)

## GRC African Summit

On 24-25 November, JSPS, NRF South Africa, and Namibia's National Commission on Research Science and Technology (NCRST) joined forces in holding the GRC African Summit in Stellenbosch, South Africa. As the cohost of the upcoming GRC Annual Meeting, JSPS has taken the initiative to encourage many more African nations to join the GRC. This summit was a milestone-setting event in bringing research-funding organizations from countries across the vast African continent together under one roof.

The summit enjoyed the participation of more than 100 science administrators and researchers, including heads and representatives of some 14 African funding agencies. Attending were also representatives from European, US and Asian funding agencies: DFG, NSF, Japan Science and Technology Agency and JSPS, whose president Dr. Yuichiro Anzai offered remarks as one of the summit's cohosting organizations.

The participants drove forward the summit's focal discussion

on network building among African research funding agencies, and on expanding international cooperative networks with research funding agencies around the world—networks that will facilitate and advance more systematically scientific exchange and international collaboration between African nations and Japan as well as other Asian and Western countries.





# “JSPS Honorary Fellow” Award Ceremony Held for Dr. Seishi Takeda

On 15 December, an award ceremony was held at JSPS’s Tokyo Office to confer the title “JSPS Honorary Fellow” on Dr. Seishi Takeda, professor emeritus, High Energy Accelerator Research Organization (KEK).

The title “JSPS Honorary Fellow” was established in July 2014 for the purpose of recognizing persons whose efforts rendered over a long period have made especially outstanding contributions to the Japan Society for the Promotion of Science.

From October 2000 through July 2004, Dr. Takeda served as the director of JSPS’s Washington Office, during which tenure he developed a strong cooperative relationship between the office and the National Science Foundation and National Institutes of Health. In 2003, he played an instrumental role in establishing JSPS’s San Francisco Office. In a collateral post he served as the director of the new office from April 2004 through July 2004; then, assuming the post full time from the

following month. During his tenure as the director of the San Francisco Office through March 2014, Dr. Takeda built up its operation and its menu of programs. He also supported the launching of the Japanese University Network in the Bay Area, lending the office’s support to JUNBA’s operation by acting as its secretariat. Through these and other efforts, he advanced JSPS landmark initiatives in building networks among Japanese researchers laboring overseas and providing on-the-ground support for the overseas development of Japanese universities.

Attending the ceremony were about 35 people who have held posts in JSPS’s two US liaison offices. They delighted in observing JSPS president Dr. Yuichiro Anzai confer this honorary title upon Dr. Takeda. At the reception that followed, the participants enjoyed renewing old friendships while looking at nostalgic photographs taken by Dr. Takeda during his tenure in the two offices.



Dr. Takeda



Dr. Takeda and Dr. Anzai with attendees

## 8<sup>th</sup> ASIAHORCs Meeting and 6<sup>th</sup> Joint Symposium Held in Thailand

On 27 November, the eighth meeting of the Asian Heads of Research Councils (ASIAHORCs) was held along with the sixth ASIAHORCs Joint Symposium. Venued in Bangkok, Thailand and hosted by the National Research Council of Thailand (NRCT),



the aim of these dual meetings was to advance science and foster talented young researchers within the Asian region.

The ASIAHORCs meeting brought the heads of leading science-promotion organizations in Japan, China, India, Indonesia, Korea, the Philippines, Thailand and Vietnam together in an exchange of views on the topic “Managing Brain Drain and Brain Circulation: Attracting and Managing Talents into Research.” In his presentation, JSPS president Dr. Yuichiro Anzai introduced JSPS activities that are being carried out to foster young researchers in Japan.

Attended by researchers from the member countries, the symposium was held on the theme “Impact of Climate Change to Food and Health.” Four researchers from Japan delivered riveting lectures on their research experiences in Asian countries.

The next set of these meetings is scheduled to be hosted by JSPS in November 2015.

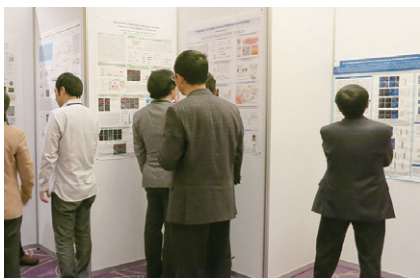
International Policy Planning Division

## Northeastern Asian Symposium Held in Korea

On 19-21 December, the 16<sup>th</sup> Northeastern Asian Symposium was held in Busan, Korea. This series of symposiums is convened annually among Japan, China and Korea. Hosted by the National Research Foundation of Korea (NRF), this year's theme was "Autophagy: From Basic to Medicine."

Addressing this process of self-digestion by cells, about 60 widely ranging oral and poster presentations were delivered, 20 by senior and junior from each of the three countries. A number of eminent Japanese researchers in this field were counted among the lecturers, drawing many auditors. As the symposium was open to both students and researchers, it attracted a large audience of about 130 people.

The curtain opened on the event with a keynote lecture by Prof. Yoshinori Ohsumi of Tokyo Institute of Technology, who is known throughout the world as the "Father of Autophagy" for his discovery of genes related to this cellular process. He was followed by spirited



Poster presentation

speeches, poster presentations, and vibrant discussions.

During the symposium, a dinner party was held to strengthen ties among the speakers. At it, Prof. Ohsumi gave a talk that drew a thunderous round of applause. He said, "When I attend international conferences in Europe, I can't help but feel envious at ease with which European go back and forth between each other's countries. It occurs to me that as our East Asian countries are located in close proximity, shouldn't we also be able to go back and forth much more easily?"



Prof. Ohsumi

Led by the Japanese program coordinator Prof. Masaaki Komatsu of Niigata University, a discussion was also advanced on the FY2015 A3 Foresight Program, for which research applications were being received on the same theme as the symposium, and on the direction of future joint research among the three countries.

The next Northeastern Asian Symposium will be hosted by JSPS on the theme "Chemical Biology."

Research Cooperation Division

## Frontiers of Science (FoS) Symposiums Held with Germany, the US and France



Poster session in JGFoS symposium

The 11<sup>th</sup> Japanese-German Frontiers of Science (JGFoS) Symposium was held together with JSPS's counterpart, the Alexander von Humboldt Foundation, in Bremen, Germany from 30 October to 2 November. Introductory messages given by the co-chairs, Dr. Christine Selhuber-Unkel (University of Kiel) and Dr. Norimichi Ukita (Nara Institute of Science and Technology), offered a prelude to the fruitful experience that the participants would enjoy over the course of the event. In the informatics' session on "Natural Human-Computer Interfaces," a chat system was set up which the participants used to ask questions, done in parallel with an oral Q&A discussion.

From 4-7 December, the National Academy of Sciences (NAS) and JSPS held the 14<sup>th</sup> Japanese-American Frontiers of Science (JAFoS) Symposium in Tokyo. The co-chairs, Dr. Joy K. Ward (University of



Discussion in JAFoS symposium

Kansas) and Dr. Toshihiko Hosoya (RIKEN), piloted the event within a highly energized atmosphere, one that engaged the 78 participants in vigorous discussions on eight topics ranging from "Origami-Paper Folding and Its Generalization" to "Metrology and Standards."

The 9<sup>th</sup> Japanese-French Frontiers of Science (JFFoS) Symposium, held from 22-25 January 2015, was attended by 70 French and Japanese researchers who enjoyed both the event and its setting in the historical city of Kyoto. JSPS co-organized the symposium with the National Center for Scientific Research (CNRS), French Ministries of Foreign Affairs and International Development (MAEDI) and of National Education, Higher Education and Research (MENESR).



Cultural tour in JFFoS symposium

Its co-chairs, Prof. Thierry Hoquet (Université Jean Moulin Lyon 3) and Prof. Satoshi Mihara (KEK), shepherded the event in ways that transcended the participants' nationalities and specialties, optimizing intermingling among them.

Frontiers of Science symposiums are designed to foster excellent young researchers who are passionate about exchanging ideas with researchers from different academic disciplines. The Planning Group Members for each symposium make an intensive effort to design and implement its sessions. Concurrently, the next PGMs start to discuss the topics of the following symposium. So, the planning for the next set of FoS symposiums is already underway.

Research Cooperation Division



## Japan-UK Symposium Held on Futuristic Computer Technologies

On 10 November, a UK-JSPS symposium, titled “Computer Graphics and Virtual Reality,” was held at the University of Edinburgh. Its aim was to bring together Japanese and British researchers in such areas as graphics, virtual reality, human-computer interaction, and computer vision. Probing new directions of research in these areas, they strengthened collegial ties while seeding joint research initiatives.

The many new concepts and revolutionary technologies reported at the symposium widened the window being opened into a future world of artificial reality experienced through senses of touch and sight. It was demonstrated that a virtual object can be artificially created using ultrasonic waves; placing one’s hand on it, a person feels as if he is actually touching patterns inscribed on the object. In another case, a mist curtain was artificially generated, upon which

images are projected. In yet another, a dynamic 3D reconstruction of a human in motion was generated by interactively controlling multiple cameras.

A researcher from Nagoya University reported on his research that applies sensing technology to the prevention of bedsores: A fiber sheet with pressure elements woven into it is spread under a patient’s bed sheet. The development of this product is seen as indicative of the university’s effort to contribute to the innovative manufacturing being advanced in the Nagoya area of Japan.

These were just a few of the 20 presentations delivered on wide-ranging topics by the Japanese and British researchers, making for a day packed full with deeply intriguing content.

JSPS London Office



## JSPS Participates in GCUB International Seminar and Visits Brazilian Universities

The Coimbra Group of Brazilian Universities (GCUB) is an association of prestigious Brazilian universities. Its mission is to promote inter-institutional and international integration of the member universities by such means as staff and student mobility programs. This was GCUB’s sixth international seminar. JSPS San Francisco Office director Dr. Masayuki Izutsu was invited to it to give a lecture.

Themed “International University: Models and Strategies,” the seminar was held in Recife, located in the northeast part of Brazil, on 15-17 October. Its more than 400 participants hailed from some 20 countries. Dr. Izutsu attended the 5<sup>th</sup> roundtable session on “Strategies and Good Practices for the Internationalization of Research and Postgraduate Studies,” where he spoke about efforts being advanced by the Japanese government to internationalize research systems and university education, JSPS’s programs to

promote the internationalization of scientific research, and the menu of activities carried out by the JSPS San Francisco Office. Dr. Izutsu took advantage of the occasion to meet representatives of the Brazilian science-promotion agency CNPq and the Mexican science-promotion agency CONACYT and discuss with them ideas about future cooperation.

During the period of 3-5 December, the San Francisco Office staff visited three Brazilian cities (São Paulo, Rio de Janeiro and Recife) and gave briefings on JSPS programs. On the 3<sup>rd</sup>, they visited FAPESP, a science-promotion agency in the state of São Paulo, where they described JSPS’s position within the policy framework of the Japanese government related to education, science and technology, and culture, and introduced JSPS’s fellowship and other programs and the San Francisco Office’s activities. On the 4<sup>th</sup>, they visited the Federal University of Rio de Janeiro and the state’s science-promotion agency FAPERJ. Then on the 5<sup>th</sup>, they held a briefing at the Federal University of Pernambuco in Recife. This was the first time for the faculty and students of Brazilian universities to be briefed on JSPS programs. These visits were also very meaningful from the perspective that they gave the staff an opportunity to exchange views directly with potential candidates for JSPS fellowship programs.

In the future as well, the San Francisco Office is committed to strengthening its ties with science-promotion organizations and universities in South and Central America including, of course, Brazil.

JSPS San Francisco Office



At the 5<sup>th</sup> roundtable in GCUB’s seminar

## JUNBA 2015 Symposium and Summit Held

The JSPS San Francisco Office operates the secretariat of the Japanese University Network in the Bay Area (JUNBA). Over two days from 9-10 January, the JUNBA 2015 symposium and summit were held, this time on the theme “Governance as a Major Leverage Tool for Improving Quality in Higher Education.” Amidst rapidly advancing globalization, the reform of university governance has become imperative to ensure an internationally excellent quality of education in Japanese universities and to foster truly global people through their curricula. Last year, Japan’s School Education Act was amended to establish clearly defined roles for university vice-presidents and faculty quorums. Against this backdrop, the members of these JUNBA meetings discussed initiatives and issues related to implementing strong university governance under leadership exerted by the university president.



This event, cosponsored by JSPS and the Consulate-General of Japan in San Francisco, drew a hall full of about 120 participants.

At the first day’s symposium, Dr. Aimée Dorr, Provost and Executive Vice President, University of California Office of the President, delivered a presentation on “Higher Education Leadership and the Role of Provosts at the University of California,” and Dr C. Judson King, Provost and Senior Vice President-Academic Affairs, Emeritus, University of California, spoke on the topic “Distribution of Governance Functions within the University of California and the Role of the Faculty in Them.” From various angles, they addressed the role of the provost and shared governance within the University of California system.

At the second day’s summit, Mr. Yoshiyuki Ohtawa, analyst in MEXT’s Higher Education Bureau delivered a keynote speech on “Strengthening the Governance Function of Universities.” Then, each of the participating universities introduced the governance reforms it is carrying out to enhance its quality of education, following which the participants engaged in vigorous rounds of Q&A and opinion sharing.

The San Francisco Office will be pleased if JUNBA 2015 has accelerated a discussion on the system of governance most effective for the participating universities.

For more information about JUNBA 2015, please visit the JUNBA website: <http://www.junba.org/junba2015.html>.

JSPS San Francisco Office

## Introducing Japan Research/Study Programs in Austria

On 28 November, the JSPS Bonn Office held its annual meeting to introduce research and study opportunities in Japan, this time at the University of Vienna. Holding this meeting for the first time in Austria expanded the office’s scope. It was held in combination with the university’s “Japan Tag” event. More than 40 students and researchers in Vienna took part in this event. A record number of institutions were represented, including about 15 universities from Japan, which set up booths to provide information on their programs.

Kicking off the meeting were greetings from Mag. DDr. Barbara Holthus from the university’s Department of East Asian Studies, and Prof. Dr. Keiichi Kodaira, director of the JSPS Bonn Office, after which the participating Japanese and Austrian institutions provided information on their Japan-visit programs and support systems. Then, representatives from each participating university introduced their student-exchange programs and unique educational and research activities. Interested members of the audience repaired in large numbers to the universities’ booths to get more detailed program descriptions.

The latter half of the day’s program featured the University of Vienna’s Japan-Tag event. Its vice-rector Prof. Dr. Heinz Fassmann talked about the importance that the university places on exchange with other countries and universities and about the state of its foreign student and researcher exchanges. Then, other representatives of the university introduced its exchange programs oriented to Japanese students and researchers.

It is expected that this event has paved the way to expanded exchange between universities and other institutions in Japan and in the German-speaking realm including Austria.

On the 28<sup>th</sup> and 29<sup>th</sup>, the German alumni association (German JSPS Club) held its tenth “Member-Invites-Member” event, this time at the Austrian Academy of Science. Alumnus Prof. Dr. Eberhard Widmann invited other members of the German Club to his academy, where Club members received scientific presentations and took a tour of the Austrian Museum of Applied Arts. It is expected that this very interesting event will mark a step in expanding the Club’s activities in Austria.

On the 29<sup>th</sup>, a Junior Forum was held. It was addressed by researchers who had experienced stays in Japan under JSPS fellowships. Nine former fellows who had participated in JSPS’s Summer Program and Postdoctoral Fellowship Programs spoke about their experiences in Japan, spurring an animated exchange of views on ways to develop career paths and build networks with other former fellows.

JSPS Bonn Office



Member-Invites-Member participants



## Science Forum and General Assembly Held at the University of Florida

On 7 November 2014, the US JSPS Fellows Alumni Association gathered at the University of Florida in Gainesville to hold its 5<sup>th</sup> Multidisciplinary Science Forum (MSF) to advance scientific research through an interdisciplinary networking approach. The forum opened with remarks by Alumni Association chair Dr. Shamim Mirza and JSPS Washington Office director Dr. Osamu Shimomura. Then, MSF host Prof. Ranga Narayanan welcomed the participants to the university and introduced Dr. Angel Kwolek-Folland, associate provost for academic and faculty affairs at the University of Florida, who spoke about the importance of international exchange with Japan. Afterwards, formal talks

were delivered by invited speakers from the two countries in five research fields (physics & mathematics, social sciences, biology & medical sciences, chemistry, and engineering), followed by presentations from seven association members. A poster session was held by 13 association members concurrently with a JSPS “info session,” in which deputy office director Mr. Naritake Abe introduced JSPS and its various programs. Attracting more than 60 participants, the 5<sup>th</sup> Multidisciplinary Science Forum was very successful both in attendance and its depth of program content.

On the following day, the US JSPS Fellows Alumni Association held its annual general assembly. Several items of business were taken up, including a review of the association’s bylaws and the establishment of a special committee to develop future plans for the association. The members agreed to continue working toward making the association an ever-more vibrant organization.

The Alumni Association holds its forum and general assembly every year in coordination with the JSPS Washington Office. The next gathering for these two events will be in November at the University of California, Davis, with the Multidisciplinary Science Forum to be hosted by Dr. Christoph Lossin.

JSPS Washington Office



### *Essay by a Former Fellow*

**Yuriy Posudin**

**Professor, National University of Life and Environmental Sciences of Ukraine  
Kiev, Ukraine**

I was very lucky to have the opportunity to visit Japan as a JSPS fellow. In 2002, I participated in an investigation on the light effects on chlorophyll fluorescence in the green macroalga *Ulva pertusa* Kjellman (*Chlorophyta*) at Kobe University’s Research Center for Inland Seas. Then from 2007, I dedicated my research to the mass exchange between mountain plants and their environment, conducted at the University of Toyama and Kyushu University.

That gave me the unique opportunity to study using highly modern scientific equipment and research technologies in Japan. I was deeply impressed with the advanced state of science and the quality of research and education in Japanese universities,

whose professors and students always exhibited a serious attitude toward their work.

My wife and I admired the politeness, kindness and erudition of the Japanese people. We also found there to be an excellent ecological situation in Japan, with careful attention paid to nature, both flora and fauna.

As a former JSPS fellow, I am much indebted to my Japanese colleagues, Prof. Hiroshi Kawai, Prof. Kyoichi Otsuki, Dr. Atsushi Kume, Dr. Tomo’omi Kumagai, Prof. Motoyoshi Ikeda, Prof. Shunitz Tanaka, and Dr. Kazuhiro Toyoda, for giving me such a valuable opportunity to advance my research in the field of Environmental Biophysics and Photobiology.

WPI (World Premier International Research Center Initiative) is a program for building globally visible, top world-level research centers.



## Materials Nanoarchitectonics—A New Paradigm of Materials Development



The International Center for Materials Nanoarchitectonics (MANA), situated within the National Institute for Materials Science (NIMS), was launched in 2007 as one of the first five research centers within the World Premier

International Research Center Initiative (WPI) program, established by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT). Under the leadership of MANA director-general Dr. Masakazu Aono, MANA is focusing its effort on creating a new nanotechnology paradigm called "Materials Nanoarchitectonics."

"Materials nanoarchitectonics" is a technological system for materials development, in which nanoscale structural units are arranged in a desired configuration and interactions among them are manipulated to create novel functionalities. To meet the challenge of perfecting this system, MANA is engaged in the innovative development and integration of five key tools (see Fig. 1). By advancing research in this new realm, the Center will make significant contributions to society in many critical areas, including

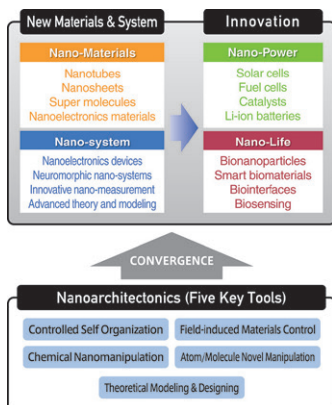


Fig. 1 Materials nanoarchitectonics

environmental and energy sustainability, next-generation computation and communications, and regenerative medicine. MANA's advanced research is conducted in four fields: Nano-Materials, Nano-System, Nano-Power and Nano-Life.

MANA has already boasted many impressive achievements over its 7-year history. One is an "atomic switch" having a synaptic operation. Recently, MANA developed the world's first "synapse device" that can autonomously reproduce processes of remembering and forgetting like the human brain. This is realized by an "atomic switch" that forms a conductive path of metal atoms precipitating from a solid electrolyte, adjustable by input frequency (see Fig. 2). This device is expected to be a key element in a neuromorphic computer that operates without preprogramming.

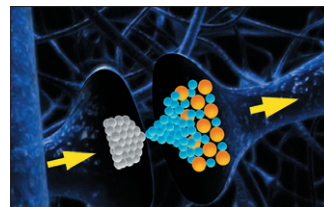


Fig. 2 Atomic switch with synaptic operation

These achievements have been made possible by our committed efforts to create a world-premier research center with high global visibility. In particular, MANA has created a "melting pot environment" wherein world-class human resources from diverse fields of specialization and different nationalities and cultures jell together. That MANA has realized true internationality is evidenced by the fact that more than half of its researchers are from other countries. This environment enables the fostering of rich international perspectives while giving birth to new ideas and original, creative research. MANA is also focusing on cultivating talented young scientists and building a global network. By sending young researchers from MANA out to higher positions at leading domestic and international research institutes, we are also expanding the global network of nanotechnology researchers with MANA as its hub.

### Professor Dmitri V. Golberg

Principal Investigator at MANA, National Institute for Materials Science



#### Profile

1990: PhD; Bardin Research Institute for Metallurgy, Moscow, Russia  
 1993-1994: JSPS Fellow, University of Tsukuba, Japan  
 2007-present: Unit Director, MANA, National Institute for Materials Science, Tsukuba, Japan  
 2010-present: Professor, University of Tsukuba, Tsukuba, Japan

Prof. Golberg started his Japanese saga more than 20 years ago. In 1993 he moved here from Moscow to initiate his first postdoctoral project at the University of Tsukuba. It was on high-temperature shape memory alloys. Since then, he has taken on many different challenges, utilizing various methods, ranging from research on intermetallic compound single crystal growth to electron microscopy studies of various nanomaterials, with particular emphasis on boron nitride nanotubes. At present, he is developing new methods for advanced in situ transmission electron microscopy used to analyze the mechanics and optoelectronics of diverse nanostructures.

"Japan offers unlimited opportunities for doing top-notch research, especially for an electron microscopist like myself, providing scientists with the state-of-the-art instruments and techniques. Joining MANA in 2007 was a milestone in my career. My possibility of hiring the most talented postdoctoral researches and students from all over the world was greatly expanded after the WPI Initiative was launched at NIMS. We became fully able to apply a decent strength of manpower and breathtaking ideas to developing the most promising concepts and directions for nanotechnology, and for designing non-trivial nanomaterials for prototype applications in novel high-performance super-capacitors, Li-ion batteries, hydrogen accumulators, mass conveyers, electrical interconnectors, field-effect transistors, electron emitters, nanoscale thermometers, solar cells, photodetectors, and many other original devices, all within the modern paradigm of "green technology" that Japan is spearheading.

"The truly well-deserved high visibility of MANA within the world's scientific community and its trademark internationalized environment allows me, my group members, and many young MANA scientists to witness frequent visits to NIMS by the most prominent scientists, e.g. Nobel Prize winners, and to engage in fruitful one-to-one discussions with them. Needless to say, such encouragement by and free idea exchanges with the most influential scientific minds is vital for one's progress as a researcher."

For more detailed information about MANA, please visit its website: <http://www.nims.go.jp/mana/>





## Dr. Deepa K. Kasaragod: Experience as a Science Dialogue Lecturer



Dr. Deepa K. Kasaragod

On January 19, a sunshiny but bitterly winter day, Dr. Deepa K. Kasaragod gave a lecture titled “Light and Optics” to 80 first and second-grade students at Shizuoka Kita High School. Coming from India, she has been a JSPS postdoctoral fellow since April 2013.

Dr. Kasaragod began her lecture by introducing similarities between Japan and India, such as *cha-batake* (tea plantations in Japan) and *chai* plantations in India.

The pictures of such similarities, unrelated to research, that she showed the students softened what had begun as a somewhat tense atmosphere in the classroom. Then, she described the structure of the eye and related diseases as a prelude to her research, which she went on to elaborate in more detail.

Dr. Kasaragod is currently conducting research on the topic “Optical Rheology: *In Vivo* Biomechanical Investigation through Birefringence” at the University of Tsukuba. She told the students that in her laboratory, researchers come from all around the world, so everybody communicates in English. She mentioned that the reason she decided to become a scientist was that science can help to find answers to issues that affect people’s daily lives. She concluded her lecture with a challenge *Do you have a dream?*—

words she wrote on the screen. After her lecture, three students asked questions in fluent English, which she answered politely yet cheerfully. She, then, conducted an optics experiment using a glass of milk and a laser pointer at the front of the classroom. The students seated at the back of the room pushed forward while others climbed on a chair to watch the very interesting experiment.

After doing her Science Dialogue lecture at Shizuoka Kita High School, Dr. Kasaragod said “I got a lot of inspiration and motivation for my research from my exchange with the students. I hope some of them may become interested in my research field and advance it with us in the future.” When saying this, her bright countenance bespoke the fruitfulness of her Science Dialogue experience.



The following fellows participated in JSPS’s Science Dialogue Program during the period from October through December 2014. For details about the program, please see its website: <http://www.jsp.go.jp/english/e-plaza/e-sdialogue/>.

Overseas Fellowship Division

Venue	Lecturer	Nationality
Iwate Prefectural Mizusawa High School	Sebastian Diebold	Germany
Ibaraki Prefectural Mito Second High School	Benjamin D. Lindner	Germany
Seishin Gakuen High School (Ibaraki)	Salvatore Cosentino	Italy
	Thang T. Nguyen	Vietnam
	Suraphong Yuma	Thailand
Gunma Prefectural Takasaki Girls' High School	Jonas Schluter	Germany
Saitama Prefectural Urawa Daiichi Girls' Senior High School	Angel Tan	Malaysia
Chiba Municipal Chiba High School	Kok Boon Neoh	Malaysia
Ichikawa Gakuen Ichikawa Senior High School (Chiba)	Iraklis Boubourakas	Greece
	Tsung-Che Chang	Taiwan
	Luca Chiari	Italy
	Susana De Vega	Spain
	Josefine Nestler	Germany
	Nicholas L. Payne	Australia
	Gregory J. Short	USA
Junior High and Senior High School at Komaba, University of Tsukuba (Tokyo)	Tommi P. Tynell	Finland
	Amaury Delamarre	France
	Guillaume Gines	France
Tokyo Metropolitan High School of Science and Technology	Seino A. K. Jongkees	New Zealand
	Trond S. Ingebrigtsen	Denmark
Tokyo Metropolitan Tama High School of Science and Technology	Dahanayakage Don G. L. Dahanayaka	Sri Lanka
Toyama Prefectural Toyama Senior High School	Gregory B. Bonn	USA
	Congping Wu	China
Kanazawa University Senior High School (Ishikawa)	Florian Gimbert	France
Fukui Prefectural Fujishima Senior High School	Martina Bofulin	Slovenia
Fukui Prefectural Koshi Senior High School	Tinh Q. Bui	Vietnam

Venue	Lecturer	Nationality
Yamanashi Prefectural Hikawa High School	Thangaraju Dheivasigamani	India
	Florian Puenner	Germany
Yamanashi Prefectural Tsuru High School	Hong Duc Doan	Vietnam
	Nikita D. Loik	Russia
Nagano-Prefecture Suwa Seiryō Senior High School	Felix N. Sima	Romania
Shizuoka Prefectural Iwata Minami High School	Richard E. Veale	USA
Shizuoka Prefectural Nirayama High School	Brian D. Carlton	USA
Aichi Prefectural Kariya High School	Nam Jin Noh	Korea
	Mikael H. T. Reponen	Finland
Aichi Prefectural Kasugai High School	Carl Frederik B. Werner	Germany
Aichi Prefectural Okazaki Senior High School	Bernd Martin M. Schmidt	Germany
	Cristian Tosa	Romania
Aichi Prefectural Zuiryo High School	Mong Sing Lai	Malaysia
Nagoya Municipal Koyo Senior High School (Aichi)	Prasanna Kumara Chikkade	India
Hyogo Prefectural Akashikita High School	Elga L. Strafella	Italy
Hiroshima University High School	Roxana Y. Parada Jaco	El Salvador
Tokushima Prefectural Tomiokahigashi High School	Graeme J. Copley	UK
Kagawa Prefectural Kan-onji Daiichi High School	Basilua A. Muzembo	DR Congo
Fukuoka Prefectural Meizen High School	Marko Jusup	Croatia
	Md. A. Rahman	Bangladesh
	Pablo Solis-Fernandez	Spain
	Dongjoon Song	Korea
Miyazaki Prefectural Nobeoka High School	Atit Silsirivanit	Thailand
Ikeda High School (Kagoshima)	Sayeh Ezzikouri	Morocco

*Hailing from Italy, Dr. Daniele Magistro conducted his research with his host Prof. Ryuta Kawashima at Tohoku University from November 2012 to November 2014 under a JSPS postdoctoral fellowship. After having received his PhD in Psychological, Anthropological and Educational Sciences from the University of Turin, he launched his career in research as a JSPS postdoctoral fellow.*

**What are you currently researching under the JSPS fellowship?**

The health of and care for a rapidly growing older population across the world poses a number of challenges. Among them are the burden imposed by the physical, mental and neurological conditions on older citizens, which exerts a significant impact on their working capacity, quality of life, and that of their caregivers. These interact with the course and treatment of comorbidities frequently associated with ageing.

The main objective of my research is to improve the elderly's quality of life, coherently with WHO priorities on Active and Healthy Ageing to support people's health and well-being.

Specifically, my research aims to do the following: First, to implement a valid, efficient dual-task physical/cognitive training program aimed at positively affecting various physical and cognitive outcomes such as mobility function, attention and working memory. Second, to understand the effect of dual-task training on neural mechanisms. Third, to assess the relationships among executive functions, working memory and attention on one side, and physical performance, especially in terms of walking coordination tasks, in the elderly population on the other side.

**How did you become interested in your research field?**

My master's degree is in Sciences and Techniques of Adapted Physical Activity, so I'm interested in all aspects of human movement related to different intensities of physical exercise, both in individuals who are healthy and not, within stabilized and supervised clinical conditions, concurrent or subsequent to various pathologies. We consider older adults to be a population with specific needs. It is well documented that normal ageing is associated with deterioration in cognitive and motor functioning; however, several studies have shown that a decline of physical and psychological skills in senior citizens is not inevitable. I like to study the relationship between movement and physiological,

psychological and neurological changing processes.

**That's very interesting. How did you get to know your Japanese host researcher?**

Prof. Kawashima is very well known in the fields of neuroscience and ageing research. During my PhD studies, I attended an intensive course for graduate students on "Ageing Society and Sustainable Development" at Hokkaido University in Sapporo. After that, my supervisor and I went to Sendai and he introduced me to Prof. Kawashima. Subsequently, I wrote to Prof. Kawashima and asked him about the possibility of becoming my host researcher.

**What else led you to choosing Japan to pursue your research?**

Japan has many prominent scientists, advanced apparatuses, and a good research atmosphere. Looking at their scientific achievements, it's plain to see that Japanese researchers are making important contributions to science. Kawashima Lab is well known in my research field. Being in Japan gave me the opportunity to work in such a famous laboratory. Moreover, the situation of Japan's ageing society is similar to the Italian one. That also motivated me to try to do my research in Japan.

**Now, what is your impression of your host institution?**

My institution, the Institute of Development, Aging and Cancer, Tohoku University is located in Sendai City. The lab's research resources are very good and innovative. The university also offers me a beautiful and quiet environment both in and out of the lab. All the members of our laboratory are friendly to me, and I am really enjoying my work here with them.

**Generally speaking, what is your impression of Japan's research environment?**

The research environment in Japan is very competitive, which spurs new ideas and advanced technologies. Integrated within the flow of globalization, Japan is recognized as one of the world's most vibrant research environments replete with extensive international exchanges and collaborations.

**What are you achieving in your research under the JSPS fellowship?**

Last month, I successfully completed an experimental dual-task training system for older adults. Now, I am going to analyze



**Daniele Magistro**

JSPS Postdoctoral Fellow, Institute of Development, Aging and Cancer, Tohoku University, Japan, 2012-present  
Lecturer, University Interfaculty School of Motor Science, University of Turin, Italy, 2011-present  
Doctoral Degree, University Interfaculty School of Motor Science, University of Turin, Italy, 2012

data from the experiment to evaluate the effect of the training relative to their motor, psychological and neurological aspects. Then, I will write papers and submit them for publication in an international journal.

**What do you do outside your research work?**

I go sightseeing to various places in Japan. I have already been to Tokyo, Kyoto, Sapporo, and Hiraizumi, as well as to Fukushima, Yamagata and Iwate prefectures. I like to visit historic sites of interest and enjoy a variety of Japanese traditional foods. In Sendai, there are a lot of opportunities for me to participate in traditional activities and events, which helps me to learn about Japanese culture and customs and to enjoy my daily life in Japan.

**You have gone to many places in Japan. As interesting places to visit, do you have recommendations for researchers from other countries?**

I think Tokyo, Nara, Kyoto are very good places to visit. At the same time, the Tohoku area (Aomori, Akira, Iwate, Miyagi, Yamagata and Fukushima prefectures) is also a very beautiful area, though tourists are not that familiar with it. Especially, these northeastern prefectures have many beautiful spots for *hanami*, cherry-blossom viewing.

**What do you think of life in Japan – its culture and customs?**

Japan's culture and customs are really



different from Italy's. It took some time for me to get used to my new and interesting life style. As Japan has a long and traditional history, it maintains its own culture and customs despite being integrated within a dynamically changing world. I really enjoy learning new things about Japan and Japanese culture every day.

*Before coming to Japan, what kind of image did you have of the country? Has your perception changed after coming here?*

Before coming to Japan I did not know what to expect. As Italy is geographically far away from Japan, I assumed it would be very different, but in what way, I didn't know. I knew the history of Japan from studying it in school, and grew up with Japanese pop culture (e.g., LUPIN the third by Monkey Punch, Mazinger Z and Devilman by Go Nagai), so I was excited to learn firsthand about what Japan is actually like.

*How was your experience as a lecturer in the Science Dialogue Program at Chiba Prefectural Chosei High School?*

Chiba Prefectural Chosei High School is a big institution in Mobarra with a lot of good facilities relative to scientific studies and activities. It has a stimulating international

environment, as the school is involved in international exchange programs and offers a scientific course with an international teacher.

Giving a lecture at the high school was really interesting and challenging experience for me. In Italy, I experienced teaching a university course, but I did not know how to go about giving a lecture to Japanese high school students. I tried to make the presentation of my research field interactive so it would be less boring. The students who attended were quite motivated and participative; they asked a lot of interesting questions regarding my topic and research in general.

I would like to encourage all JSPS fellows to participate in the Science Dialogue Program, as I believe it will be a really great personal experience for them.

*What do you plan to do after your fellowship ends?*

I would like to finish my research in Japan. I would like to have the opportunity to remain in this lab and work with my Japanese colleagues until my present research has been completed. Once my fellowship ends, I would like to share my experiences with my Italian colleagues back in Italy, while maintaining a strong

relationship with my Japanese colleagues.

*Please give some advice for young researchers who may be thinking about doing research in Japan?*

I think that for researchers from other countries, especially from European countries, Japan is a great place to work as it offers a high level of technology and innovation. Japan is also a great place for developing one's research skills and gaining general research experience. Doing research here has definitely been a valuable experience for me.

*In our interview with Dr. Magistro, we found that his life as a researcher in Japan has not only been very fruitful but also enjoyable. In describing his ongoing research, he gave interesting examples of commonalities and contrasts between Italian and Japanese societies. His work is very timely at this critical juncture of ageing societies around the world, particularly as it seeks to mitigate adverse conditions that the elderly can suffer. We look forward to the publication of the work he has been carrying out with his Japanese colleagues, and to the bridges they will build between the research communities of Japan and Italy and Europe at large.*

## Introducing Japan: Sendai

Sendai is the biggest city in the northeastern Tohoku area of Japan. But, its lifestyle is really different from other large cities like Tokyo and Kyoto. It's a quieter city, where you can enjoy tree-lined streets and public spaces even in the downtown area. In Sendai, you see an assortment of very traditional and highly modern buildings and activities. During my first year in Sendai, I could see and appreciate a clear change of seasons, from a cold, snowy winter to beautiful floral scents in spring, from a hot, humid summer to the many vivid colors in autumn. Even though the Sendai area was hit hard by the March 2011 earthquake and tsunami, the people's



Sendai in autumn

resilience and motivation to move forward is evident all around.

Sendai has historical importance, especially for the Tohoku people, as it is the birthplace of Date Masamune, who founded the city in the late 16<sup>th</sup> century. Today, you can find monuments, shrines and statues dedicated to him all around the city. In fact, there is a connection between Masamune and Italy: He sent his retainer Hasekura Tsunenaga, who was to be the first Japanese ambassador to the Americas and Europe, on a diplomatic mission to deliver a letter to the Vatican in Rome.

Not far from Sendai, there are many beautiful and historic places to visit, including Matsushima (pine-clad islets) Bay, Yamadera mountain temple, the Zao mountain range, and the historical town of Hiraizumi. Because public transportation is so convenient in Japan, it is quite easy to get to these and other places in the area.

For me, the beauty of Sendai lies in the intimacy that results from its compact size. You can travel to all corners of the city on bike, as well as in and out of the city on jaunts to see the neighboring countryside.

I enjoy traditional and sporting events with people of the community. Last year, I discovered the thrill of Japanese professional baseball when Sendai's team, Rakuten Eagles, won the national championship.



Sendai Aoba-Matsuri





**Cover photo**

A red-varnished plate and cherry blossom spray set the scene for a *washoku* Japanese meal in the spring.

## 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.

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