

JSPS Quarterly

Japan Society for the Promotion of Science



FEATURE: JSPS Prize

TOPICS

● JSPS Prize	2
● Fourth HOPE Meeting Held	7
● Conference Held for Young Japanese and European Researchers	8
● Fifteenth Meeting Held of India-Japan Science Council	8
● China-Japan-Korea Young Researchers Workshop Held in China	8
● Bangladesh JSPS Alumni Association Holds Symposium	9
● Symposium on Risk Management Held in Washington, DC	9
● Workshop on Japan's IT Policies Held at UCB	9
● Symposium on Religion in the Public Sphere Held at USC	10
● International Symposium Held under JSPS London Scheme	10
● Japanese University Briefing Held in Dalian, China	10
● JSPS Program Briefing Held in Guandong, China	11
● JSPS Strasbourg Office Visits University of Neuchatel	11
● Alumni Assembly and RONPAKU Medal Award Ceremony Held in Bangkok	12
● JSPS Bangkok Opens New Office	12
● Science Dialogue	13
● Recent Visitors to JSPS	15
● JSPS's 80 th Anniversary	15

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Eighth Award of JSPS Prize

On 27 February, a ceremony was held to award the eighth JSPS Prize. Selected were 24 talented young researchers with excellent records of scientific inquiry and exceptional promise to be trailblazers of scientific research in Japan. The ceremony for the FY2011 Prize was held at the Japan Academy in the presence of Their Imperial Highnesses Prince and Princess Akishino.

Selection of JSPS Prize Awardees

JSPS sent out requests for Prize nominations to 3,545 Japanese research institutions and academic societies, from which it received 226 in May. Adding the carryovers from the prior year, 348 nominees were screened by the researchers of JSPS's Research Center for Science Systems. Based on the results, the JSPS Prize Selection Committee, chaired by Dr. Leo Esaki (1973 Nobel laureate in physics) and comprising 12 members, made the final decision on the 24 awardees.

Award Ceremony

The ceremony for awarding the JSPS Prize was held in conjunction with the awarding of the Japan Academy Medal. At the ceremony on 27 February, JSPS president Dr. Yuichiro Anzai offered an opening message, followed by a report on the selection



process from Dr. Esaki. Then, Dr. Anzai presented the 24 recipients with a certificate of merit, a medal, and a purse of ¥1.1 million.

A tandem ceremony was held to confer the Japan Academy Medal on six of the JSPS Prize recipients. First, Japan Academy president Prof. Masaaki Kubo delivered welcoming remarks, after which Prof. Masatoshi Takeichi, chairman of the Academy's selection committee, explained the vetting process. Then, Prof. Kubo presented the medal and a commemorative gift to each of the awardees.

Prince Akishino offered remarks and Mr.

Hirofumi Hirano, Minister of Education, Culture, Sports, Science and Technology, gave a congratulatory message. To conclude the meeting, a message of appreciation on behalf of the Prize recipients was delivered by Dr. Emi Nishimura, professor, Medical Research Institute, Tokyo Medical and Dental University.

After the ceremony, a celebration party was held. Attended by Prince and Princess Akishino, the Prize recipients, their guests, and the ceremony attendees, an atmosphere conducive to pleasant conversation was enjoyed by all.

Report and Remarks by Dr. Leo Esaki at JSPS Prize Award Ceremony

As chair of the JSPS Prize Selection Committee, I wish to describe the selection process for the eighth annual JSPS Prize and to offer some words of encouragement to the young recipients.

In March 2011, a request for referrals was sent out to universities, research institutes and related academic societies. Altogether 348 individuals were nominated to the Selection Committee. For a period of approximately five months from June 2011, the Research Center for Science Systems, established within the Japan Society for the Promotion of Science, carried out the preliminary screening, based on the results of which the 12-member Selection Committee chose the recipients for the eighth JSPS Prize.

Meeting on 25 November, the Committee selected you, the 24 gifted young researchers gathered here, as the 2011 JSPS Prize recipients. In coming up with today's result, the members of the Committee did

all within the limits of our knowledge and wisdom to evaluate fairly the research accomplishments and future prospects of each person within the very rich field of nominees. You, the awardees, constitute one out of 14.5 of the 348 nominees.

On your selection for this prestigious award, I wish to extend both you and the colleagues who support your work our most hearty congratulations. Unmistakably, each of you is an exceptionally talented researcher. I look forward to this Prize giving you added impetus in advancing your research initiatives and, by extension, exerting influence on Japan's path into the future.

I am sure that each of you has charted a course for advancing your research, but, for reference sake, allow me to tell you about my own path as a researcher. In 1965, I received the Japan Academy Prize for having invented the Esaki diode and advanced research on its application. Looking back, that was 47 years ago. I was about the same

age as you are now. Looking ahead 47 years, it will be 2059. At that time, I believe you will have both enjoyed and succeeded in your research as I have in mine.

When I was a student at the University of Tokyo in 1945, quantum mechanics had not yet fully proliferated in Japan. Nevertheless, knowledge of this innovative field intensely impressed and stimulated us students. In September 1947, I was among the last students to graduate from Tokyo while it was still an "imperial" university. Going out into the world, I scripted a scenario for my life as a researcher; it was to apply knowledge of quantum mechanics to the industrial world and develop quantum devices. Securing employment at an electronics company, my research strategy was to "do what nobody else had done."

Life is a drama in which each person plays the leading role. As a basic tenant of democracy, one's future should not be left to fate but rather determined by the scenario

one scripts for oneself.

In 1957 at age 32, I had at long last become the first in the world to succeed in observing tunnel current in solid matter. As the diode I had strived and struggled to invent *surprisingly* showed negative resistance, it leaped me into the limelight for its various applications. It is perhaps this kind of serendipity that is the real thrill of scientific research. Though I myself am not an especially spiritual person, I would have been remiss not to thank the Goddess of Fortune for revealing herself to me in August 1957. In 1973 at age 48, I basked again in the sunlight having won the Nobel Prize in Physics for inventing the Esaki diode. With the exception of research in

theoretical fields, the money spent on my research was probably less than any other that has won a Nobel Prize in science.

At the time I received the Prize, I was working at the IBM Thomas J. Watson Research Center on the outskirts of New York, where I had started research on an application of quantum mechanics based on a new strategy totally unrelated to the Esaki diode. It entailed artificial material with yet-unelucidated electric properties not found in the natural world. Based on solid-state quantum theory, I designed a semiconductor superlattice and sought to manufacture it. While this research was costly and took the cooperation of a lot of people to carry out, it pioneered a new field

that emanated considerable ripple effects. In 1998 at age 73, I received the Japan Prize for inventing that artificial superlattice.

Research should be expected to produce results of high value with vibrant ripple effects into the future. To you young researchers of various specializations, I encourage you to discern for yourselves what new frontiers lie in your respective fields and to search out the keys you will need to unlock them. Furthermore, be resolute in your challenge to reach the world's most lofty heights. It is my prayer to the Goddess of Fortune that you will also encounter surprising leaps and bounds along your pathway to the top.

FY2011 JSPS Prize Awardees

Humanities and Social Sciences		
Waka Aoyama	Associate Professor, Research Faculty of Media and Communication, Hokkaido University	"An Ethnographic Study of Poverty in the Philippines: Socio-Economic Life of the Sama-Bajau in Davao City"
Hiroki Ichi	Associate Professor, Graduate School of Letters, Osaka University	"Wooden Tablets and the Transportation System in Ancient Japan"
Koji Kuwakino	Associate Professor, Graduate School of Letters, Osaka University	"Issues in Mnemonics and Visual Representation of Architectural Space in Modern Italy"
Satoshi Hirata	Program-Specific Associate Professor, Primate Research Institute, Kyoto University	"Quest for the Evolutionary Origins of Social Intelligence through the Comparative Cognitive Studies in Humans and Chimpanzees"
Kiyoshi Miyake	Associate Professor, Institute for Research in Humanities, Kyoto University	"A History of the Penal System in Ancient China"
Chiaki Moriguchi	Professor, Institute of Economic Research, Hitotsubashi University	"Comparative Historical Analysis of Institutional Developments in the USA and Japan"
Mathematics; Physical Sciences; Chemistry; Engineering Sciences		
Teruo Ono	Professor, Institute for Chemical Research, Kyoto University	"The Basic and Applied Research of Spin-Devices Based on Nano-Magnetic Materials"
Takeshi Katsumi	Professor, Graduate School of Global Environmental Studies, Kyoto University	"Performance-Based Approach for Preservation and Remediation of Geo-Environment"
Takashi Kumagai	Professor, Research Institute for Mathematical Sciences, Kyoto University	"Analysis and Theory of Stochastic Processes on Disordered Media"
Hiroshi Shinokubo	Professor, Graduate School of Engineering, Nagoya University	"Development of Novel Synthetic Methods of Functional Porphyrins"
Kazutomo Suenaga	Prime Senior Researcher, Nanotube Research Center, National Institute of Advanced Industrial Science and Technology	"Observation and Analysis of Single-Molecule and Single-Atom by Electron-Microscope"
Ken Takai	Program Director, Institute of Biogeosciences, Japan Agency for Marine-Earth Science and Technology	"Study on the Extremobiosphere Driven by the Principal Biogeochemical Interactions, the Limits of Life and the Early Evolution of Life in the Earth"
Takahiro Tanaka	Professor, Yukawa Institute for Theoretical Physics, Kyoto University	"Gravity of Braneworld"
Kouhei Tsumoto	Professor, Institute of Medical Science, The University of Tokyo	"Dissection of Protein Interactions for Innovations"
Takayoshi Nakano	Professor, Graduate School of Engineering, Osaka University	"Novel Materials Scientific Study on Bone Microstructure and Biomaterials for Bone Replacement"
Yoshiaki Nishibayashi	Associate Professor, Graduate School of Engineering, The University of Tokyo	"Development of New System for Nitrogen Fixation Using Transition Metal Complexes"
Kazunori Matsuura	Associate Professor, Graduate School of Engineering, Kyushu University	"Construction of Artificial Nanostructures through Self-Assembly of DNA or Peptides"
Biological Sciences; Agricultural Sciences; Medical, Dental, Pharmaceutical Sciences		
Masaki Ieda	Project Assistant Professor, School of Medicine, Keio University	"Mechanisms of Heart Development and Regeneration"
Kenji Inaba	Associate Professor, Medical Institute of Bioregulation, Kyushu University	"Clarification of Disulfide Linkage and Cleavage Systems Involved in Quality Control of Cellular Proteins"
Yasuteru Urano	Professor, Graduate School of Medicine, The University of Tokyo	"Development of Innovative Fluorescence Probes for Live Imaging of Tumors and Cellular Responses"
Kengo Kinoshita	Professor, Graduate School of Information Sciences, Tohoku University	"Prediction of Functions for the Genes with Unknown Functions through Bioinformatics"
Naoki Takaya	Professor, Faculty of Life and Environmental Sciences, University of Tsukuba	"Diversity of Electron-Transferring Systems in Filamentous Fungi"
Yukihide Tomari	Associate Professor, Institute of Molecular and Cellular Biosciences, The University of Tokyo	"Molecular Dissection and Application of Small RNA Mechanisms"
Emi Nishimura	Professor, Medical Research Institute, Tokyo Medical and Dental University	"Identification of Melanocyte Stem Cells and Mechanisms for Their Maintenance and Aging"

Titles and affiliations current as of 1 January 2012

Young Researchers at Vanguard of Science in Japan

Awardees Speak about Their Work and Aspirations

Humanities and Social Sciences

Wooden Tablets and the Transportation System in Ancient Japan

A large volume of wooden tablets, over 380,000 items, has been excavated in Japan. I mainly study wooden tablets excavated from the Asuka-Fujiwara Capital sites, numbering about 45,000 items. Most of Asuka-Fujiwara tablets have been recovered after 1997. I researched these wooden tablets at the Nara National Research Institute for Cultural Properties during the period from 2001 to 2009.

My method of study is very simple. First, I thoroughly observe the wooden tablets in an effort to extract a lot of information. Second, I reconstruct the life of the wooden tablets by considering the 5Ws1H (when, where, who, what, why, how) of them. Third, I try to discover new historical facts by analyzing the tablets from a comparative, traditional perspective. In my book published in 2010, *Asuka-Fujiwara mokkan no kenkyu* (Study of wooden tablets excavated from the Asuka-Fujiwara Capital sites), I presented a new

view of the Asuka era (AD 592-710) in this manner.

The primary purpose of my study is to examine the formation of a nation-state in Japan. Therefore, I have also studied the transportation system between capital and provinces in ancient Japan, and published a book titled *Subete no michi wa Miyako e* (All roads go to Heijo Capital) as an interim report in 2011.

As to my recent research endeavors, I have embarked on projects to conduct collaborative work on such subjects as the characteristics of wooden tablets in East Asia, the process in which Chinese characters were used in ancient Japan, and temple administration and ceremonies in East Asia. Through these collaborations bringing together specialties in various fields, I hope to draw closer to achieving the primary purpose of my study.



Dr. Hiroki Ichi

- 2009-present: Associate Professor, Graduate School of Letters, Osaka University
- 2008: Senior Researcher, Nara National Research Institute for Cultural Properties, National Institutes for Cultural Heritage
- 2001: Researcher, Nara National Cultural Properties Research Institute
- 2001: Received Ph.D. from Osaka University
- 1998: JSPS Doctoral Course Fellow, Osaka University
- 1995: Graduated from Osaka University

Understanding Social Intelligence in Chimpanzees

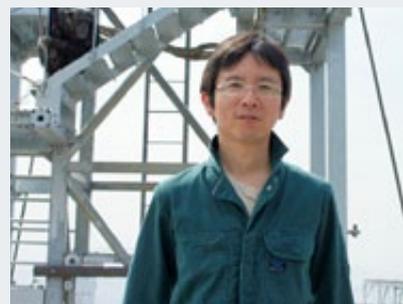
Chimpanzees are evolutionarily closest to humans. Evolution of our appearance and posture can be traced by digging up fossils, but the behavior and mind of humans cannot be learned from these fossil records. Chimpanzee research helps us to understand the origins of human nature.

My research focus is on the social intelligence of chimpanzees. The social intelligence hypothesis posits that the evolution of intelligence is driven by the need to live in a complex social world where the individual is faced with various social issues, such as competition, cooperation, and conflict resolution. I have conducted a series of studies that create experimental social situations in which chimpanzees compete with each other, learn tool-using behaviors from other individuals, and cooperate with partners.

Among my experimental studies, my favorite is a cooperation experiment in which two chimpanzees are required to pull each end of a rope simultaneously to drag blocks supporting food into reach. Other chimpanzee

researchers have also tried to investigate cooperation in experimental tasks but have experienced difficulties. One cooperative task that can easily be imagined is to place a very heavy obstacle that can only be removed if two individuals work together. However, chimpanzees are much stronger than humans, which makes it very difficult to install an obstacle heavy enough for this experiment. I reversed this way of thinking by creating a simple device to be used in performing a cooperative task. The two chimpanzees actually succeeded in solving and carrying out this task cooperatively. The device is now being used by other researchers in experiments with birds, elephants, rats, and humans.

In short, I would like to know more about ourselves by gaining knowledge about chimpanzees. Much has been uncovered by the continuous efforts of scientists studying nonhuman primates, but we still have a lot more to learn from them.



Dr. Satoshi Hirata

- 2011-present: Program-Specific Associate Professor, Primate Research Institute, Kyoto University
- 2008: Chief Scientist, Great Ape Research Institute, Hayashibara Biochemical Laboratories, Inc.
- 2002: Head Researcher, Great Ape Research Institute, Hayashibara Biochemical Laboratories, Inc.
- 2001: JSPS Postdoctoral Research Fellow, Kyoto University
- 2001: Received Ph.D. from Kyoto University
- 1998: JSPS Doctoral Course Fellow, Kyoto University
- 1996: Graduated from Kyoto University

Mathematics; Physical Sciences; Chemistry; Engineering Sciences

Exploration of Hidden Dark Ecosystems in the Present and Ancient Earth and on Extraterrestrial Planets and Moons

I have devoted myself to exploratory research on microbial communities living in the dark and deep environments of this planet since the beginning of my professional research life. These microbes thrive in the deep sea and deep subsurface are so-called "extremophiles," most of them being sustained by earth-interior geothermal energy, not by sunlight. Since their first discovery in 1977 in a deep-sea hot spring, dark ecosystems have been thought broadly to host direct descendants of the most ancient living forms on the Earth. However, nobody has succeeded in demonstrating this elegant scenario. I have investigated and characterized the diversity and functions of microbial communities in many deep-sea hydrothermal environments all over the world with different geographic and geological conditions. These accumulated physical-chemical environmental data and microbial community compositions and function characteristics, together with inspiration based on my direct observation of these environments, have

led me to conceptualizing a principle controlling the development of dark microbial ecosystems in such extreme environments. It is a concept of living community formation based on available energy potentials, which provides a key insight into understanding the most ancient living forms. Thus, my colleagues and I have posed a hypothesis for how the most ancient living ecosystem was generated on this planet about four billion years ago. This hypothesis is now being substantiated by theoretical simulations, geological observations and laboratory experiments in various places around the world. I believe this principle is not only applicable to any microbial community in the dark environment of the Earth but also to any community of living forms on extraterrestrial planets and moons in our solar system. One of my future research plans is, therefore, to search for extraterrestrial living forms or their activities on the best target planets or moons where our principle leads us to explore.



Dr. Ken Takai

2005-present: Program Director, Japan Agency for Marine-Earth Science and Technology
2000: Research Scientist, Japan Marine Science and Technology Center
1998: Postdoctoral Fellow, Pacific Northwest National Laboratory
1997: Domestic Research Fellow, Japan Science and Technology Corporation
1997: JSPS Postdoctoral Research Fellow, Kyoto University
1997: Received Ph.D. from Kyoto University
1994: Visiting Scientist, School of Oceanography, University of Washington
1992: Graduated from Kyoto University

Brane Gravity

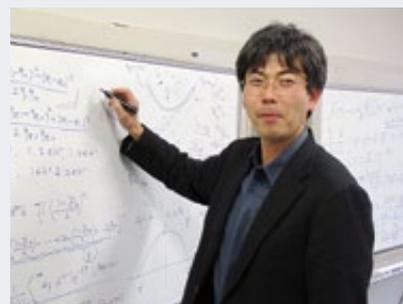
"Braneworld" is a new concept on the basic structure of spacetime. Genuine fundamental theory in physics must provide a mathematically consistent prediction to any phenomena in the universe. The best candidate of such a fundamental theory is string theory. It requires the dimension of spacetime to be 10 (or 11). Namely, we have six unseen spatial extra-dimensions. Usually, such extra-dimensions are thought to be compactified into a small size, not detectable by any observations that human-beings can achieve. However, the novel idea of braneworld has shed doubt on this widespread belief.

In the braneworld scenario, our visible world is localized on a three-dimensional sheet, called a "brane." The existence of such an object can be seen as a logical consequence of string theory. If our visible world is localized on a brane, the extra-dimensions can be relatively large. However, gravity, which is the deformation of spacetime, senses the presence of such extra-dimensions. Therefore, their presence may leave an observ-

able anomalous signature in gravity.

One interesting possibility of braneworld is that the extension of extra-dimensions can be infinite. Even in such a model, gravity theory realized in our visible world turns out to be very close to the prediction of four-dimensional Einstein gravity. My collaborator and I have offered the first complete analysis needed to predict the leading order correction in such a model.

In many aspects, the theoretical study of cosmology is just untested extrapolations of physics on the Earth. However, recent progress in observations has started to reveal directly what happened in the early universe. In such an era, we need to understand what kind of models of the universe are really theoretically consistent and what kind are not. Along this direction of research advancement, the braneworld might also become detectable observationally.



Dr. Takahiro Tanaka

2008-present: Professor, Yukawa Institute for Theoretical Physics, Kyoto University
2003: Associate Professor, Graduate School of Science, Kyoto University
2000: Associate Professor, Yukawa Institute for Theoretical Physics, Kyoto University
1995: Assistant Professor, Graduate School of Science, Osaka University
1995: JSPS Postdoctoral Research Fellow, Kyoto University
1995: Received Ph.D. from Kyoto University
1993: JSPS Doctoral Course Fellow, Kyoto University
1990: Graduated from Kyoto University

Dissecting Small RNA Pathways

Since the discovery of RNA interference (RNAi) by Nobel laureates Dr. Andrew Fire and Dr. Craig Mello in 1998, it has rapidly become apparent that ~20-30 nucleotide long, small non-coding RNAs play critical roles in biological processes as diverse as development, cell proliferation, apoptosis, metabolism, differentiation, and carcinogenesis. Small RNAs are now extensively used in laboratory research, and are also promising therapeutic agents to specifically shut down disease-causing genes.

Notwithstanding, how small RNAs silence their target genes remains obscure. Small RNAs by themselves cannot catalyze any reactions; they form the effector ribonucleoprotein complex, termed RNA-induced silencing complex (RISC), and guide RISC to the target mRNAs to be silenced. Thus, it is fundamental to understand how RISC is assembled and how RISC functions to inhibit protein synthesis of target genes.

Both RISC assembly and RISC-mediated target silencing follow rather complicated, multi-step pathways. We have been utilizing "classical" biochemistry to dissect small RNA pathways into each elementary step. During the past five years, we have discovered that small RNAs are orderly sorted into distinct types of RISCs, whose target silencing mechanisms are also different. We have also revealed structural determinants for RISC assembly, clarifying how authenticity of small RNAs is monitored before mature, functional RISC is made. Furthermore, our results indicated that, unexpectedly, the heat-shock chaperone machinery plays a key role in loading small RNAs into Argonaute, the core protein component of RISC, presumably by inducing a dramatic conformational opening of Argonaute. We will continue to seek to clarify the whole picture of RNA silencing mechanisms, with the hope that someday our basic findings will be translated into therapeutic approaches.



Dr. Yukihide Tomari

- 2009-present: Associate Professor, Institute of Molecular and Cellular Biosciences, The University of Tokyo
- 2006: Assistant Professor, Institute of Molecular and Cellular Biosciences, The University of Tokyo
- 2003: Postdoctoral Fellow, University of Massachusetts Medical School
- 2003: Received Ph.D. from The University of Tokyo
- 1998: Graduated from The University of Tokyo

Identification and Regulation of Stem Cells and Their Niche: Keys to Tissue Regeneration and Aging

Multicellular organisms have specialized tissues and organs, in which stem cell systems play fundamental roles in tissue turnover and homeostasis. Until fairly recently it has remained largely unknown in most tissues and organs where stem cells exist which cell population maintain stem cells and how their future fates are regulated with aging.

The hair follicle is a mini-organ of the skin that grows a pigmented hair. We identified melanocyte stem cells which produce melanin pigment for hair pigmentation in 2002. Then, we characterized the population and found that hair follicle stem cells, which surround them and are critical for cyclic hair follicle growth, are required for melanocyte stem cell maintenance and renewal. We clarified the underlying mechanisms by identifying multiple genes essential for stem cell maintenance/renewal and also how these genes are regulated by exogenous factors secreted from their surrounding microenvironment. These factors turned out to be essential for stem cell maintenance by promoting their quiescence and immaturity. This line of studies will lead to future progress

in regenerative medicine in aging societies.

Organismal aging can be characterized by decline of tissue functions and tissue regenerative capabilities. It has been controversial whether stem cells age or not in tissues. We found that melanocyte stem cells are lost with aging and this explained why our hair turns gray with aging. We found that genomic stress abrogates renewal of melanocyte stem cells through their differentiation into mature melanocytes within the niche microenvironment. Our series of studies revealed that stem cell aging and eventual depletion of stem cells underlie at least some of aging phenomena seen in mammals and can be keys to tissue regeneration and anti-aging. We are currently extending the above approach to understand tissue aging in different tissues as well as mechanisms of organismal aging. Also, we are trying to understand the aging program in different tissues so as to elucidate pathogenesis of a number of diseases associated with aging and to advance future preventive medicine.



Dr. Emi Nishimura

- 2009-present: Professor, Medical Research Institute, Tokyo Medical and Dental University
- 2006: Professor, Cancer Research Institute, Kanazawa University
- 2004: Associate Professor, Creative Research Initiative "Sousei" (CRIS), Hokkaido University
- 2003: JSPS Postdoctoral Research Fellow
- 2001: JSPS Postdoctoral Fellow for Research Abroad, Harvard Medical School
- 2000: Research Fellow, Dana-Farber Cancer Institute, Harvard Medical School
- 2000: Received Ph.D. from Kyoto University
- 1997: JSPS Doctoral Course Fellow, Kyoto University
- 1994: Resident, Department of Dermatology, Kyoto University Hospital
- 1994: Graduated from Shiga University of Medical Science

Fourth HOPE Meeting Held

JSPS has been holding HOPE Meetings since 2008. They provide a platform for graduate students in countries/regions of the Asia-Pacific to engage in face-to-face discussions with Nobel laureates and other eminent scientists while exchanging ideas and views with young researchers of their own generation.

From 7-11 March, the fourth in the series of HOPE Meetings was held in Tsukuba, Japan. Its organizing committee was chaired by Dr. Makoto Kobayashi, 2008 Nobel laureate in physics and director of JSPS's Research Center for Science Systems. Themed "Chemistry for Creating the Future," this year's meeting brought together 100 graduate students from 17 countries/regions of the Asia-Pacific, who interacted with eight Nobel laureates and two other world-renown scientists.

The program of HOPE Meetings comprises lectures by eminent scientists, lecturer-led group discussions, a poster session by the participants, multinational team presentations, and research facility observation tours, all of which are carried out in English.



Dr. Suzuki answering students' questions

A reception was held on the first evening of this year's meeting, in which messages of encouragement to the young participants were delivered by honored guests—Tsukuba City mayor Mr. Ken-ichi Ichihara and University of Tsukuba vice president Dr. Akira Ukawa.

In the HOPE Meeting, the young researchers heard directly from the lecturers about the research milestones each has achieved and, more stirringly, about their perceptions of science and ways of living as scientists. Taking advantage of the opportunity provided by the meeting to interact closely with peers from other countries and cultures, the participants were also able to expand their horizons and cultivate collegial relationships. These garnered assets along with the stimulation and deep insights they gained from the lecturers are sure to reverberate long into the young researchers' future careers. Using the new knowledge acquired and networks seeded over the course of this one-week event, the participants are expected to go on to great heights as they spread their wings and soar within the research communities of the region and the wider world beyond.

Side Events

On 9 March, midstream in the HOPE Meeting, a HOPE Dialogue meeting was held for Japanese high school students aspiring to become scientists. Planned and carried in coordination with JSPS's Science Dialogue Program, the meeting gave the students a rare

opportunity to hear lectures from and to converse with Nobel laureates both directly and in English, thereby kindling their interest in science and expanding their international perspectives.



Dr. Shechtman at HOPE Dialogue

Then, on 11 March on the last day of the meeting, a HOPE Meeting Jr. was held for elementary and middle school students at the National Museum of Nature and Science, giving them an opportunity to interact with Nobel laureates. The meeting was attended by 21 fourth through ninth graders assembled from around Japan. Its program was designed in such a way as to stimulate their interest in science while enjoying interaction with the Nobel laureates.



Dr. Negishi at HOPE Meeting Jr.

Fourth HOPE Meeting Lecturers

Dr. Leo Esaki	1973 Nobel Laureate in Physics
Prof. Sir John E. Walker	1997 Nobel Laureate in Chemistry
Dr. Ryoji Noyori	2001 Nobel Laureate in Chemistry
Dr. Roderick MacKinnon	2003 Nobel Laureate in Chemistry
Dr. Makoto Kobayashi	2008 Nobel Laureate in Physics
Dr. Akira Suzuki	2010 Nobel Laureate in Chemistry
Dr. Ei-ichi Negishi	2010 Nobel Laureate in Chemistry
Dr. Dan Shechtman	2011 Nobel Laureate in Chemistry
Dr. Gunnar Öquist	Professor emeritus, Umeå University
Dr. Takuzo Aida	Professor, The University of Tokyo

— Asian Program Division

Conference Held for Young Japanese and European Researchers

Over the period from 28 February through 4 March, JSPS and European Science Foundation held an ESF-JSPS Frontier Science Conference for Young Researchers on the theme “Mathematics for Innovation: Large and Complex Systems.” Venued in Tokyo, this eighth seminar in the series was co-chaired by Prof. Yoshiaki Maeda, Keio University, and Prof. Volker Mehrmann, Technische Universität Berlin. Commanding an overview of mathematics across



such diverse fields as disaster prevention, material science, engineering, and life science, the program’s challenging agenda probed the cutting edge of interdisciplinary advances in mathematical sciences.

Forty-seven young researchers selected via open recruitment in Japan and European countries lodged together over the course of the 6-day program. From the “faculty” of frontline researchers pioneering interfaces between mathematics and other fields, they learned about the latest advances being forged over a spectrum of cross-disciplinary research endeavors. The participants were also given opportunities to introduce their own research activities by giving short talks and poster-session presentations.

Through their participation in the seminar, the young researchers cultivated seeds for exchange that overarches conventional domains, while also taking advantage of the opportunity to build networks spanning the mathematician communities of Europe and Japan.

— Research Cooperation Division II

Fifteenth Meeting Held of India-Japan Science Council

On 17 March, JSPS and the Indian government’s Department of Science and Technology (DST) co-convened the 15th meeting of the India-Japan Science Council in Kolkata, India. It assembled 13 members from the two countries including the co-chairs, Dr. Atsuto Suzuki and Dr. Thirumalachari Ramasami. It was the first time for Dr. Suzuki to participate as the Japanese co-chair since his predecessor Dr. Keitaro Yoshihara stepped down.

At the meeting, the joint research projects and seminar topics to be implemented in FY 2012 were selected, the next Asian Academic Seminar was planned, and DST cooperation in holding HOPE Meetings was addressed. The six areas (i.e., molecular and supramolecular sciences, advanced materials, modern biology and biotechnology, manufacturing sciences, astronomical and space science, and surface and interface sciences) of Indo-Japanese collaboration were reconsidered and a decision was made to expand



them. A call for applications in the new areas is scheduled to be issued for FY2013 projects.

The 16th meeting of the Council will be held in January or February 2013 in Japan.

— Asian Program Division

China-Japan-Korea Young Researchers Workshop Held in China

On 28 April, the second China-Japan-Korea Young Researchers Workshop was held in Shanghai. At the Japan-China-Korea Trilateral Summit held in May 2010, it was agreed to hold this workshop periodically. Carried out by the Ministry of Education, Culture, Sports, Science and Technology (Japan), Ministry of Science and Technology (China), and Ministry of Education, Science and Technology (Korea), the workshop was supported by JSPS, which selected the Japanese participants and shared in its funding.

With “New Technologies, New Industries, New Development”



as its overarching theme, the workshop was joined by around 18 up-and-coming young researchers from each Japan, China and Korea, for a total of 56 participants. In the plenary session, a keynote speech on the topic “S&T Development and Industrial Changes in the Future” was given by one leading authority from each country. Dr. Akira Goto, professor, National Graduate Institute for Policy Studies, delivered the speech on the Japan side. Then, parallel group discussions were held on three topics: “Prospects for the development of next-generation information technology industry,” “Bio-technology and bio-economy,” and “Prospects for the development of new energy,” in which the young researchers from the three countries gave presentations and engaged each other in spirited discussions. Held on the same day as the Third Trilateral China-Japan-Korea Ministerial Meeting on Science and Technology Cooperation, the closing ceremony was attended by the ministers of the three countries, who received reports by the young researchers on their group discussions.

The next China-Japan-Korea Young Researchers Workshop is scheduled to be held in Japan.

— Asian Program Division

Bangladesh JSPS Alumni Association Holds Symposium

On 24 February, the Bangladesh JSPS Alumni Association held its third symposium on the theme “Science for Society” at the Bangladesh Agricultural Research Council (BARC) in Dhaka. After opening remarks by the organizers, congratulatory messages were offered by Mr. Mahfuz Anam, editor, The Daily Star (Bangladesh’s main English-language newspaper), Dr. M. Muhibur



Rahman, University Grants Commission of Bangladesh (UGC), and Mr. Hiroyuki Minami, Chargé d’Affaires, Embassy of Japan in Bangladesh. Then, keynote speeches were delivered by Dr. Tsutomu Kimura, advisor to the Ministry of Education, Culture, Sports, Science and Technology, and Dr. Naiyyum Choudhury, secretary, Bangladesh Academy of Sciences and president, Bangladesh JSPS Alumni Association.

As one of the commemorative events held to celebrate the 40th anniversary of the establishment of diplomatic relations between Bangladesh and Japan, this 2-day symposium featured ten lectures and 18 presentations, which were wrapped up with the following messages: “Science is an instrument for meeting the demands and challenges of society,” and “Scientific thinking is essential for the promotion and application of science for the benefit and enrichment of society.” Reported in the following day’s newspapers, the symposium struck a strong cord of interest among the public in the Dhaka area.

— Overseas Fellowship Division

Symposium on Risk Management Held in Washington, DC

On 9 March, a year after the Great East Japan Earthquake, the JSPS Washington Office and the U.S.-Japan Research Institute (USJI) held a symposium on the theme “Risk Management” at the Cosmos Club in Washington, DC.

The symposium opened with remarks from Dr. Hirotaka Sugawara, director, JSPS Washington Office, and Mr. Ichiro Fujisaki, Ambassador of Japan to the United States, who were followed by keynote speeches from Dr. Akito Arima, former Minister of Education and Science, and Dr. Frank von Hippel, professor of Princeton University. Divided into three sessions on “natural disasters,” “reactor safety,” and “reconstruction economics,” the theme was addressed from a variety of angles by US and Japanese authorities in related fields. The line-up of speakers included Dr. Richard Meserve, former chairman of the United States Nuclear Regulatory Commission, and Dr. Yoshimitsu Okada, president of the National Research Institute for Earth Science and Disaster



Prevention. A spirited panel discussion enjoyed participation from the floor.

At a reception held at the Cosmos Club after the symposium, the speakers exchanged views with the attendees, who numbered over 200.

— JSPS Washington Office

Workshop on Japan’s IT Policies Held at UCB

A workshop titled “Japan’s Information Technology Challenge: Government Policies and Market Dynamics in the Digital Age” was held at the University of California, Berkeley (UCB), on 6 February by the university’s Center for Japanese Studies, Berkeley Roundtable on the International Economy, and JSPS, with support



from the Consulate-General of Japan in San Francisco. It addressed critical issues pertaining to information technology within a Japanese context.

The first session delved into Japan’s IT challenges within the global environment, with focus on how to take advantage of its IT assets including cloud computing. Concentrating on Japan’s IT strategy, the second session spawned a lively discussion among the participants on government policies and business models. Finally, a captivating keynote speech was given by Dr. Jun Murai, professor, Keio University in which he examined the successes and failures of Japan’s IT strategy and proposed new plans and goals to be set based on past experiences and lessons. Through this workshop, a fruitful dialogue was advanced between the scholars and IT industry experts, shedding light on how government policies could be implemented in ways that help Japan boost its competitiveness in the IT domain.

— JSPS San Francisco Office

Symposium on Religion in the Public Sphere Held at USC

On 27-28 April, a symposium titled “Religion in the Public Sphere: Japan and the World” was held at the University of Southern California (USC) in Los Angeles. It was sponsored by USC’s Center for Japanese Religions and Culture and JSPS, commemorating the inauguration of the Center and the 80th anniversary of JSPS’s establishment.



The first day featured a viewing of the Japanese film “Abraxas”—fusion of the divine and infernal—which tells the story of a Buddhist priest who, relegated to the austere regimen at a local temple, became depressed and listless yearning for the freer days of his youth as a punk rocker, and how he sought to overcome his travails by holding a live rock concert in the town. The movie was shot in the Fukushima area before the earthquake struck and its cast and production team included many people from the prefecture.

On the second day, four presentations were given by Japan-based researchers with US-based academic theorists serving as respondents. Their focus was on the role of religion in state formation, consumer culture and public education as well as in times of crisis such as the Great East Japan Earthquake and its disaster relief efforts. A highly interactive discussion on these topics evoked deeper insights among the participants into how religion continues to make its mark on public discourse in contemporary Japan, while strengthening their understanding of the significance of religion in an increasingly globalized world.

— JSPS San Francisco Office

International Symposium Held under JSPS London Scheme

On 9-10 February, an Anglo-Japanese symposium, titled “Interdisciplinary Approaches for the Study of Senescence,” was held at Cancer Research UK, Cambridge Research Institute (CRI). Implemented under the JSPS London Office’s symposium scheme for Japanese researchers based in the UK, the “scientific lead” on the UK side was Dr. Masashi Narita of CRI and on the Japan side was Dr. Toru Kondo of Ehime University. Taking various approaches to their research on aging, they and the other speakers are working to set new milestones in this field of pressing social importance.

The symposium provided the platform for an exchange that bridged university researchers from the two countries, with presentations given by Dr. Masayuki Miura, University of Tokyo; Dr. Hiroshi Kimura, Osaka University; Dr. Hiroyuki Kugoh, Tottori University; Dr. Keisuke Okita, Kyoto University; Dr. Peter D. Adams, University of Glasgow; Dr. Nicol Keith, also University of Glasgow; Dr. Gordon Peters, Cancer Research UK, London Research Institute; and Dr. Jesús Gil, Medical Research Council, Clinical Sciences Centre.



Titled “Towards Cellular Rejuvenation,” the keynote address was delivered by Dr. David Beach, Barts and The London School of Medicine and Dentistry, who is a world-renowned authority in this field. Given the timeliness of the theme and the distinguished cast of speakers, the symposium attracted a high level of interest with some 100 attendees.

— JSPS London Office

Japanese University Briefing Held in Dalian, China

On 10-11 March, a joint briefing on Japanese universities was held in Dalian, China. The event was organized as a component of the JSPS Beijing Office’s initiative to support the internationalization of Japanese universities. Planned together with Japanese universities, research institutions, affiliated organizations, and the Embassy of Japan in China, the briefing was held to provide Chinese students with information on higher education in Japan and on the latest education and research developments accentuating each university. Its ultimate objective was to offer the Chinese students opportunities to engage in research in Japan’s graduate schools.

Venued at Dalian University of Technology and Dalian University of Foreign Languages, the meeting enjoyed the participation of 21 Japanese universities and institutions, each of which set up a booth to introduce their programs. Time was also allotted for them



to address the entire floor, highlighting their respective hallmark features. After the briefing, a seminar was held on a theme of “Chinese students studying in Japan,” spurring a lively discussion among the Chinese and Japanese participants.

Held as one of the events to celebrate the 40th anniversary of

normalized relations between China and Japan, the briefing and seminar attracted more than 1,400 people over the two days they were convened, attesting to the strong interest among Chinese students in studying and doing research in Japan.

— JSPS Beijing Office

JSPS Program Briefing Held in Guangdong, China

On 24 February, the JSPS Beijing Office held, with the cooperation of the Guangdong branch of the JSPS Fellow Alumni Association in China, a JSPS program briefing at the Guangdong Institute of Eco-Environment and Soil Sciences. It was attended by some 50 researchers. The meeting began with remarks from Dr. Shungui Zhou, deputy director of the Guangdong Institute, and an introduction of Japan’s S&T policy by Dr. Mamoru Sasaki, director of the JSPS Beijing Office, followed by a talk from a former JSPS fellow on his experiences in Japan. In a Q&A session, the attendees inquired in considerable depth about JSPS programs, especially its fellowship opportunities.

After the briefing, the alumni repaired to a hall in the neighborhood of the Institute, where they engaged in a wide exchange of views, including the state of the Guangdong branch’s operation, and strengthened friendship ties among themselves. They also discussed a scientific seminar that the branch is scheduled to hold later in the



2012 fiscal year. All in all, the meeting was very productive for the JSPS alumni who had gathered to carry out its agenda.

— JSPS Beijing Office

JSPS Strasbourg Office Visits University of Neuchatel

On 23 February, the JSPS Strasbourg Office visited the University of Neuchatel (UniNE) in Switzerland to hold a program-introduction meeting in its Faculty of Science. After receiving a warm welcome by UniNE president Prof. Martine Rahier and vice president Prof.



Nathalie Tissot, the staff gave a presentation on JSPS international programs to 30 researchers and doctoral students interested in doing research in Japan. Prof. Marie-Aleth Lacaille-Dubois, professor, University of Burgundy and JSPS French Alumni Association board member, introduced the association activities and told about her own experiences in Japan. Then, two former JSPS fellows, Dr. Bruno Therrien and Dr. Nicolas Sierro, now members of UniNE’s faculty, talked about the interesting experiences they had during their stays in Japan and encouraged the attendees to add research in Japan as a unique step in advancing their careers. As an international university with more than 50% of its researchers hailing from abroad, UniNE boasts an excellent level of research, which we witnessed while visiting the laboratories of its chemistry and physics departments.

— JSPS Strasbourg Office

Welcome to JARC-Net

JSPS operates the Japan-Affiliated Research Community Network (JARC-Net) database. Its purpose is to support the maintenance and expansion of working networks forged between Japan and other countries over long years of implementing JSPS’s various international exchange and fellowship programs.

Registered members of the database are able to access other members’ profiles, including their names, affiliations, positions, research fields, and education/work histories. They can then use this information to look for new research partners or to broaden support for their activities by mobilizing past colleagues, such as university or JSPS program alumni. Members are also provided an information mail service on JSPS’s international exchange and cooperation programs.

Registration in the JARC-Net is open to all who are interested in research exchange between Japan and other countries, including but not limited to overseas students and researchers who have experienced stays in Japan, Japanese researchers interested in research exchanges with colleagues in other countries, international exchange program administrators in universities and research institutions, and corporate R&D personnel.

We look forward to you registering on and taking active advantage of our JARC-Net service. Please visit our website: <http://www.jps.go.jp/english/e-affiliated/>.

— Asian Program Division

Alumni Assembly and RONPAKU Medal Award Ceremony Held in Bangkok

On 3 February, the JSPS Bangkok Office held a general assembly of the JSPS Alumni Forum of Thailand (JAFT) and a JSPS-NRCT RONPAKU Medal Award Ceremony at the Siam City Hotel in Bangkok.

Attended by about 40 alumni members, this general assembly was the third to be held by the association since its first one in February 2010. It was kicked off by JAFT president Dr. Busaba Yongsmith, who reported on the association's activities going back to the days of its establishment. Her remarks were followed by an energetic discussion among the members on such items of business as changes in the association's title and membership fees.

Co-organized annually with the National Research Council of Thailand since 2003, the JSPS-NRCT RONPAKU Medal Award Ceremony was held in the afternoon. At it, a medal was awarded to the three researchers who had graduated from the JSPS RONPAKU (Dissertation PhD) Program by earning their doctoral degrees from Japanese universities in FY 2010. The purpose of the award was to salute the RONPAKU fellows for their achievements and to encourage them in advancing their research endeavors.



At JAFT general assembly



RONPAKU graduates holding their medals

At the ceremony attended by many JAFT members, congratulatory remarks were offered by Mr. Tetsuo Hasegawa, first secretary, Embassy of Japan in Thailand, and Mrs. Pimpun Pongpidjayamaad, director, NRCT's Office of International Affairs. Mr. Hisashi Kato, director, JSPS's International Program Department, presented the medals to the three RONPAKU graduates, who then offered a summary of their doctoral dissertations.

A special lecture was given by Dr. Takuya Nihira, professor, Osaka University, on the theme "Research Experience between Thailand and Japan with JSPS Programs," drawing upon his ongoing experience in JSPS's Asian CORE Program, his hosting of a FY2010 Japan-revisiting fellow under the BRIDGE Fellowship Program, and his long years of participation in other JSPS activities. He was loudly applauded by the attending young researchers and JSPS alumni for the wealth of information so interestingly delivered in his presentation.

— JSPS Bangkok Office

JSPS Bangkok Opens New Office

As of 17 March, the JSPS Bangkok Office has been situated at its new location. Please update your contact information as follows:

JSPS Bangkok Office
No. 1016/1, 10th Fl., Serm-Mit Tower,
159 Sukhumvit Soi 21,
Bangkok 10110, Thailand
Tel: +66-2-661-6533 Fax: +66-2-661-6535



In December 2010, the Japanese government's Cabinet issued a policy revising the operations of Japan's independent administrative institutions, of which JSPS is one. Pursuant to the new policy, the JSPS Bangkok Office moved into an office shared with the Japan Student Services Organization (JASSO).

On 11 April, an "office warming" was held. Invited to it were Japanese representatives of nine organizations including the Embassy of Japan in Thailand, independent agencies and universities. At the gathering, the Office's future role and mission within Southeast Asia and its strengthened collaboration with counterpart Thai organizations were addressed. Along with it, a confab for an exchange of views among representatives of Japanese organizations with bases in Thailand was also held.

A congratulatory message was offered by Mr. Tetsuo Hasegawa, first secretary, Embassy of Japan in Thailand. Ms. Helga Tabuchi, deputy director, JSPS International Program Department, presented an overview of JSPS's programs, including a history of Japan's exchange with Asian countries and future prospects for the region's development. Then, Bangkok Office director Dr. Wataru Takeuchi reported on the Office's activities over the past year.

The views expressed and suggestions offered by the participants from diverse positions and vantage points will be applied as reference by the Office as we move our operation forward with renewed vigor into the future.

— JSPS Bangkok Office

Aomori Prefectural Hachinohe Kita High School

Date: 19 January

Dr. Okolo B. SIMON (Nigeria)

Host institution: The University of Tokyo

Title: "Natural Resources and Sustainable Development in Africa"



Aomori Prefectural Sanbongi High School

Date: 7 February

Dr. Hernando P. BACOSA

(Philippines)

Host institution: Tohoku University

Title: "Our Tiny Friend, Our Great Friends"



Akita Prefectural Yokote Seiryou Gakuin High School

Date: 27 January

Dr. Enkhjargal BUDBAZAR

(Mongolia)

Host institution: Tohoku University

Title: "My Dream in Medical Science"



Fukushima Prefectural Fukushima High School

Date: 23 January

Dr. Po-Chun LIU (Taiwan)

Host institution: University of Tsukuba

Title: "To Mimic the Real World by Using Small Molecules"



Junior High and Senior High School at Komaba, University of Tsukuba (Tokyo)

Date: 14 January

Dr. Lynett DANKS (UK)

Host institution: Tokyo Medical and Dental University

Title: "Osteoimmunology"



Date: 21 January

Dr. Emilie ROULLEAU (France)

Host institution: The University of Tokyo

Title: "Noble Gases and Their Application to Study the Degassing of the Earth in Subduction Zone through the Volcanic Activity"

Tokyo Metropolitan High School of Science and Technology

Date: 19 March

Dr. Daniel D. FRIEDRICH (Germany)

Host institution: The University of Tokyo

Title: "Gravitational Waves: Listening to the Universe"



Ishikawa Prefectural Nanao High School

Date: 13 January

Dr. James S. M. ANDERSON (Canada)

Host institution: The University of Tokyo

Title: "Why Study Science?"

Dr. Jocelyn BEDARD (Canada)

Host institution: Osaka University

Title: "The Long Road to the Chloroplast!"

Dr. Guang LONG (China)

Host institution: Fukui University

Title: "Transplantation of Stem Cells for Spinal Cord Repair"

Dr. Emilie E. LOUVET (France)

Host institution: Kyoto University

Title: "Structural Study of the Nucleolus by Atomic Force Microscopy"

Fukui Prefectural Fujishima Senior High School

Date: 18 February

Dr. Denis DAMIRON (France)

Host institution: The University of Tokyo

Title: "Nanotechnology: Research and Technology at Atomic and Molecular Scales"

Date: 22 February

Dr. Mandy S. Y. LUNG (Australia)

Host institution: Kyoto University

Title: "My Life as a Neuroscientist"

Yamanashi Prefectural Tsuru High School

Date: 27 January

Dr. Joni JUPESTA (Indonesia)

Host institution: National Graduate Institute for Policy Studies

Title: "Sustainability Transitions in Emerging Economies: Case of Indonesia"



Dr. Johannes SCHMUDE (Germany)

Host institution: The University of Tokyo

Title: "A Problem in Particle Physics"

Date: 7 February

Dr. Arri PRIIMAGI (Estonia)

Host institution: Tokyo Institute of Technology

Title: "About Finland, About Playing with Light"



Dr. Abdelhak TALBI (Algeria)

Host institution: The University of Tokyo

Title: "Squeezing Time for Information"

Date: 14 March

Dr. Robert J. JOHANSSON (Sweden)

Host institution: RIKEN

Title: "Research with Supercomputers"

Yamanashi Prefectural Yoshida High School

Date: 18 January

Dr. Gilles D. R. BANOUKEPA
(France)

Host institution: Shinshu University
Title: "Carbon Nanotube and Nanotechnology"



Aichi Prefectural Kasugai High School

Date: 20 February

Dr. Konstantin KULICHIKHIN
(Russia)

Host institution: Nagoya University
Title: "Modern Methods of Biochemical Analysis in Plant Science"



Nagano Prefecture Suwa Seiryō High School

Date: 21 February

Dr. William NG (Australia)

Host institution: Keio University
Title: "Skin Regeneration Using Pluripotent Stem Cells"

Nagoya Koyo Senior High School (Aichi)

Date: 25 January

Dr. Gulinuer MUTELIEFU (China)

Host institution: Nagoya University
Title: "Lifestyle-Related Disease"

Gifu Prefectural Ena High School

Date: 11 January

Dr. Timothy J. STASEVICH (USA)

Host institution: Osaka University
Title: "Seeing Cells in Action!"



Takada Senior High School (Mie)

Date: 9 March

Dr. Michael P. DELMO (Philippines)

Host institution: Osaka University
Title: "Large Magnetoresistance in Silicon"



Shizuoka Kita High School (Shizuoka)

Date: 26 January

Dr. Matteo M. GUERRINI (Italy)

Host institution: Tokyo Medical and Dental University
Title: "Human Osteoclast-poor Forms of Osteopetrosis Associated to Mutation in the TNFSF11 (RANKL) and TNFRSF11A (RANK) Genes"

Wakayama Prefectural Koyo High School

Date: 13 January

Dr. Cedric E. THOMAS (France)

Host institution: Osaka University
Title: "How to Create Energy by Using Plasma Science? 1. Thermonuclear Fusion, 2. Solar Cells"



Shizuoka Municipal Senior High School (Shizuoka)

Date: 12 January

Dr. Philippe SAINT-CRICQ RIVIERE
(France)

Host institution: The University of Tokyo
Title: "Green Chemistry and Nanotechnology"

Dr. James B. WING (UK)

Host institution: Osaka University
Title: "T-Regulatory Cells: Policemen of the Immune System"



Shizuoka Prefectural Hamamatsu Kita High School

Date: 9 February

Dr. Sergej POLISSKI (Germany)

Host institution: Kyoto University
Title: "Lithium Ion Batteries—A 'Bright' Future?!"



Wakayama Shin-ai Girls' Junior and Senior High School (Wakayama)

Date: 13 March

Dr. Goran VAAGE (Norway)

Host institution: Osaka University
Title: "Latest Developments in Linguistics"



Shizuoka Prefectural Iwata Minami High School

Date: 15 February

Dr. Jean-Daniel COMPAIN (France)

Host institution: The University of Tokyo
Title: "An Introduction to Polyoxometalate Chemistry"



Seishin Girls' High School (Okayama)

Date: 17 January

Dr. Simon D. SONG (Australia)

Host institution: Kyoto University
Title: "Microsatellites Development and Application"

Kumamoto Prefectural Daini High School

Date: 19 January

Dr. Mattia BUTTA (Italy)

Host institution: Kyushu University
Title: "Magnetism Around Us"



Dr. Pavel A. DUB (Russia)
Host institution: Tokyo Institute of Technology
Title: "Private Life of Molecules"



Recent Visitors to JSPS (February–April 2012)

Deputy Director-General, CAS Bureau of International Cooperation

On 1 March, Mr. Hua-Sheng Qiu, deputy director-general, Bureau of International Cooperation, Chinese Academy of Sciences (CAS), paid a courtesy visit to JSPS president Dr. Yuichiro Anzai. Over more than three decades, JSPS and CAS have had a close relationship of collaboration. Exchanging views on their bilateral activities, Dr. Anzai asked Mr. Qiu for his support in maintaining and strengthening

the relationship long-enjoyed between the two organizations. With the JSPS Beijing Office slated to convene a symposium commemorating the 40th anniversary of normalized relations between China and Japan, Dr. Anzai reiterated his thanks to Mr. Qiu for CAS's overall symposium support, including lecturer selection, as its joint organizer.

— Asian Program Division



First Under-Secretary of State, Egyptian Ministry of Higher Education

On 5 March, Dr. Galal Eldeen Hamza Elgemeie, First Under-Secretary of State for Cultural Affairs and Missions, Egyptian Ministry of Higher Education, came to JSPS to meet with JSPS executive director Mr. Hayashi Towatari. Mr. Towatari thanked Dr. Elgemeie for the proactive cooperation his ministry accords JSPS's

international programs. In reply to a request for sustained support, Dr. Elgemeie expressed a desire for even more young researcher-centered exchanges with JSPS, as his ministry is placing strong emphasis on fostering talented Egyptian researchers.

— Asian Program Division



JSPS's 80th Anniversary



This year marks the 80th anniversary of JSPS's establishment.

Some eighty years ago in the thick of the great depression, the early Showa Period was wracked with turmoil. Amidst that environment, there was a strong need to advance scientific research as a way for the government to stabilize the society. In 1931, the twelfth president of the Imperial Academy Dr. Joji Sakurai proposed the launching of a citizen's movement to establish a science-promotion organization with the wide-tiered support of both academia and industry.

At one point, consideration was given to establishing an organization to advance scientific research as a government project, but stringent fiscal conditions at the time conspired to nix the idea. Though an effort was made, it stopped short with a provisional budget passed in FY 1932 to finance a study of the concept. Given this situation, Emperor Showa donated an endowment of ¥1.5 million to encourage the promotion of science. With it, the Japan Society for the Promotion of Science was established on 28 December 1932, with Dr. Sakurai as its first president.

Having reached the 80th year of JSPS's operation, a symbol mark was created to celebrate this milestone. The bottom part of the mark symbolizes the pool of support provided by JSPS to advance science since its establishment in 1932. The number "80" represents the morning sun rising from the pool. Implicit in this design is the promise of JSPS's continuing development as Japan's core institution for advancing science far into the future.

— Policy Planning, Information and Systems Division



Cover photo:

Water Yo-Yos

A favorite of children at *matsuri* (festivals), these colorfully decorated balloons are partially filled with water and attached to an elastic string, which allows them to be bounced up and down like a regular yo-yo.

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, Emblem of the Japan Society for the Promotion of Science

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.



New Subscribers, Address Changes, Reader Comments

Contact us at the below email address or fax number if you are not a current subscriber and interested in receiving the *JSPS Quarterly*, or are a subscriber but have changed your mailing address.

Please let us have your comments and impressions about the newsletter.

E-mail: quarterly@jps.go.jp
Fax: +81-3-3263-1854

For further information on JSPS's organization and programs, please visit our website [www.jps.go.jp/english/], or mail or fax inquiries to JSPS Fellows Plaza using the address or fax number given below. JSPS Quarterly and our brochure may also be downloaded.

● JSPS Fellows Plaza

8 Ichibancho, Chiyoda-ku, Tokyo 102-8472
Tel: +81-3-3263-1872 Fax: +81-3-3263-1854
<http://www.jps.go.jp/english/e-plaza/>

Information can also be obtained from our regional offices listed below.

● JSPS Washington Office

2001 L Street, N.W., Suite 1050,
Washington, D.C. 20036, USA
Tel: +1-202-659-8190 Fax: +1-202-659-8199
E-mail: info@jpsusa.org
<http://www.jpsusa.org/>

● JSPS San Francisco Office

2001 Addison Street, Suite 260,
Berkeley, CA 94704, USA
Tel: +1-510-665-1890 Fax: +1-510-665-1891
E-mail: webmaster@jpsusa-sf.org
<http://www.jpsusa-sf.org/>

● JSPS Bonn Office

Wissenschaftszentrum, Ahrstr. 58, 53175,
Bonn, GERMANY
Tel: +49-228-375050 Fax: +49-228-957777
E-mail: info@jps-bonn.de
<http://www.jps-bonn.de/>

● JSPS London Office

14 Stephenson Way, London, NW1 2HD, UK
Tel: +44-20-7255-4660 Fax: +44-20-7255-4669
E-mail: enquire@jps.org
<http://www.jps.org/>

● JSPS Stockholm Office

Retzius Vag 3, S171 77 Stockholm, SWEDEN
Tel: +46-8-5248-4561 Fax: +46-8-31-38-86
E-mail: info@jps-sto.com
<http://www.jps-sto.com/>

● JSPS Strasbourg Office

Maison Universitaire France-Japon
42a, avenue de la Forêt-Noire,
67000 Strasbourg, FRANCE
Tel: +33-3-6885-2017 Fax: +33-3-6885-2014
E-mail: jps@japon.u-strasbg.fr
<http://jps.u-strasbg.fr/>

● JSPS Bangkok Office

No. 1016/1, 10th Fl., Serm-Mit Tower,
159 Sukhumvit Soi 21,
Bangkok 10110, THAILAND
Tel: +66-2-661-6533 Fax: +66-2-661-6535
E-mail: bkk02@jps-th.org
<http://www.jps-th.org/>

● JSPS Beijing Office

616 Library of Chinese Academy of Sciences (CAS)
33 Beisihuan Xilu, Zhongguancun,
Beijing 100190, P. R. CHINA
Tel: +86-10-6253-8332 Fax: +86-10-6253-8664
E-mail: beijing@jps.org.cn
<http://www.jps.org.cn/>

● JSPS Cairo Research Station

9 Al-Kamel Muhammad Street,
Flat No. 4, Zamalek, Cairo, EGYPT
Tel & Fax: +20-2-27363752
E-mail: webmaster@jpscairo.com
<http://jpscairo.com/>

● JSPS Nairobi Research Station

209/346/39 Riverside Drive Chiromo,
Nairobi, KENYA
Tel: +254-20-4442424 Fax: +254-20-4442112
E-mail: jps1@africaonline.co.ke
<http://www.jpsnairobi.org/>